

4736
County of Louth

Ninth
Annual Report

upon the

Health & Sanitary Conditions
of the County & Districts

1936

Dunfalk:

"Democracy" Printing Works, 3 Earl St.

1937

County of Louth

THE
NATIONAL
INSTITUTE
FOR
RESEARCH
IN
SOBRYING

**Ninth
Annual Report**

upon the

Health & Sanitary Conditions
of the County & Districts

during

1936

by

J. A. MUSGRAVE.

L. & L.M.R.C.P.I. & L. & L.M.R.C.S.I. D.P.H.

COUNTY MEDICAL OFFICER OF HEALTH

Dundalk:

"Democrat" Printing Works, 3 Earl St.

1937

"The natural instinct of animated life, to which man also is originally subject, is self preservation and self-interest. But men are so ordered and constituted that the individual cannot secure his own interests unless he contribute to the common welfare."

(WALLACE ON PHILOSOPHY OF EPICTETUS 1st CENTURY A.D.)

* * * *

To the County Council, and the Board of Health and Public Assistance of the County of Louth.

Ladies and Gentlemen,

In compliance with the requirements of the County Medical Officers of Health Order, 1926, Paragraph 28, the Annual Sanitary Report is presented herewith.

Following the precedent established in 1931 on the grounds of economy, three reports are included, viz., Annual Sanitary, Annual Tuberculosis, Annual School.

In this review some curtailment of written matter has been made necessary owing to the fact that the Milk and Dairies Act came into operation on the 1st January, 1937. Consequently an effort has been made to confine particulars of the operations of the Louth Department of Health to tabulated form wherever possible.

As I have stated elsewhere, the Milk and Dairies Act, 1935, is one of the greatest enactments which has at any time come under the direction of the Department of Health. A tremendous amount of good to the health of the public will result from the thorough and efficient operation of the Act. On the other hand, if the work

which is required is not carried out in an efficient manner, the position in regard to the public health will be worse than it would be if the Act had never been made law.

The half-hearted operation of such an important Act cannot fail to work real evil, in that the legislation gives the public a sense of security, while the danger of milk-borne infection will remain.

The initial organisation of the work which is to be carried out under the Milk and Dairies Act, 1935, falls within the same period of the year which is usually devoted to the preparation of the Annual Sanitary Report.

The Louth Department of Health is understaffed, and therefore this report, except in the section dealing with milk, has been abridged wherever possible.

I have the honour to be,

Ladies and Gentlemen,

Your obedient Servant,

J. A. MUSGRAVE.

Public Health Dept.

County Offices,

May, 1937.

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VITAL STATISTICS

POPULATION—64,294.

Rural—35,113. Urban—29,181.

Births (total number registered)	1,256
Rate per 1,000 of the population ...	19.53
Deaths (total number registered) ...	900
Rate per 1,000 of the population ...	13.99
Marriages (total number registered) ...	305
Rate per 1,000 of the population ...	4.74

The corrected Birth Rates for the previous nine years were 18.7, 20.56, 19.06, 19.08, 18.97, 18.6, 19.31, 19.97 and 18.58.

The corrected Death Rates were 15.24, 14.81, 14.79, 14.17, 14.27, 15.9, 13.80, 14.29, and 16.67, for previous nine years.

The corrected Marriage Rates for same period were 3.54, 3.83, 4.57, 3.97, 4.27, 4.16, 4.95, 4.48 and 5.38.

Deaths of Infants under one year for Louth County are returned at 98 (a rate of 78 per 1,000 births), giving Louth a tie with one other county for the 12th highest place in Saorstat Eireann.

The principal Epidemic Diseases Death Rate for year 1936 is returned as 0.3 per 1,000 of the population, giving Louth a tie with six other counties for second lowest place in Saorstat Eircann. This rate was 0.7, 0.84, 0.61, 0.48, 0.4, 0.5, 0.7 and 0.6 for preceding nine years.

The under-quoted table gives a Summary of Deaths from

Infectious Diseases for the past ten years:—

	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936
Scarlet Fever	2	—	—	1	1	2	2	2	2	5
Enteric Fever	—	1	1	1	—	—	—	2	—	—
Measles	2	1	2	2	6	2	3	—	3	3
Whooping Cough	22	9	4	4	—	8	10	12	1	—
Diphtheria	11	10	8	4	4	13	4	7	19	3
	—	—	—	—	—	—	—	—	—	—
	37	21	15	12	11	25	19	23	25	11

All the three deaths from Diphtheria are returned to Dundalk Urban District.

Deaths due to Enteritis and Diarrhoea of children under two years of age during 1936 are returned as 11.

An analysis of districts in which the above deaths occurred gives the following counts:—

Dundalk	...	...	5
Drogheda	...	...	4
Ardee	...	...	1
Castlebellingham	...	...	1

The death rate for Puerperal Sepsis is returned as 3.2 per 1,000 births, the rate for other puerperal conditions as 7.2 per 1,000 births.

The corresponding rates for Saorstat Eireann are 1.6 and 4.2 per 1,000 births, respectively.

The death rate from Tuberculosis gives a return of 1.3 per 1,000 of the population. This rate is further analysed as 0.9 pulmonary tuberculosis and 0.4 for other forms.

The number of deaths from Cancer for 1936 is returned as 91, giving a rate of 1.4 per 1,000 of the population. The cancer return for the previous nine years was 93, 86, 85, 100, 92, 103, 88, 95 and 73, respectively.

Influenza returns a death rate of 6, being at the rate of 0.1 per 1,000 of the population, as against 30, 21, 38, 9, 22, 24, 35, 13 and 11, respectively, for the previous nine years.

Statements giving particulars of Marriages, Births and Deaths, etc., for each Superintendent Registrar's District in County Louth for the year 1936.

(Unrevised Figures)

<i>Superintendent Registrar's District,</i>	<i>Area in Statute Acres,</i>	<i>Population census 1936,</i>	<i>Marriages,</i>	<i>Births,</i>	<i>Deaths,</i>	<i>Inquest Cases,</i>	<i>No. of Successful Primary Vaccinations</i>
Ardee	67,239	11,205	42	197	145	7	143
Drogheda	41,979	19,646	99	467	266	11	220
Dundalk	93,596	33,443	164	592	489	26	146
	202,814	64,294	305	1256	900	44	509

<i>Superintendent Registrar's District.</i>	DEATHS		DEATHS FROM												
	OF														
	<i>Infants under 1 year.</i>	<i>Persons aged 65 years and upwards</i>	<i>Tuber- culosis,</i>		<i>Typhoid Fever.</i>	<i>Measles.</i>	<i>Scarlet Fever.</i>	<i>Whooping Cough.</i>	<i>Diphtheria.</i>	<i>Diarrhoea & Enteritis (Children under 2 yrs.)</i>	<i>Influenza.</i>	<i>Cancer.</i>	<i>Violence.</i>	<i>Number of uncertified deaths.</i>	
			<i>Pulmonary.</i>	<i>Other Forms.</i>											
Ardee	15	65	10	4	—	—	1	—	—	2	1	15	2	6	
Drogheda	30	124	15	7	—	2	—	—	—	4	1	26	11	12	
Dundalk	53	208	33	14	—	1	4	—	3	5	4	50	17	43	
	98	397	58	25	—	3	5	—	3	11	6	91	30	61	

THE PREVENTION AND CONTROL OF INFECTIOUS DISEASE

During the year 1936, the total number of cases notified was 197, being at the rate of 30.64 per 10,000 of the population.

The corresponding rates for 1928, 1929, 1930, 1931, 1932, 1933, 1934 and 1935 were 25.8, 21.03, 22.7, 14.02, 25.5, 14.02, 18.01 and 34.58.

Scarlet Fever. One hundred and twenty-four cases of Scarlet Fever were notified during the year 1936, and five deaths are returned.

The number of cases of Scarlet Fever returned for the past nine years was: 35, 35, 40, 39, 84, 36, 28, 29 and 60. The death-rate was: nil, nil, 1, 1, 2, 2, 2, 2, for the same periods.

The cases notified occurred in the following districts:—

Dundalk	No. 1	Urban	...	50
Dundalk	No. 2	Urban	...	21
Dundalk	No. 1	Rural	...	4
Dundalk	No. 2	Rural	...	4
Drogheda	Urban	...	...	2
Ardee	...	...	...	13
Dunleer	...	...	...	3
Termonfeckin	...	...	...	1
Castlebellingham	...	...	...	3
Louth	...	...	...	1
Barronstown	...	...	...	4
Carlingford	...	...	...	6
Ravensdale	...	...	...	12

Diphtheria. Fifty cases of Diphtheria were notified during the year 1936, and three deaths occurred.

The above cases occurred in the under-quoted Dispensary Districts:—

Dundalk	No. 1	Urban	...	6
Dundalk	No. 2	Urban	...	2
Dundalk	No. 1	Rural	...	3
Dundalk	No. 2	Rural	...	3
Drogheda	Urban	...	...	17
Ardee	...	...	...	7
Dunleer	...	...	...	8
Carlingford	...	...	...	3
Barronstown	...	...	...	1

Enteric. During the year three cases of Enteric Fever were notified from the following districts:—Ardee 2, Drogheda Urban 1. There were no deaths from this disease during 1936.

In regard to the two Ardee cases, these both occurred in the Mental Hospital and an investigation was carried out. No “carriers” were detected, although full bacteriological examinations were made in the cases of all “suspects.” Dr. P. Moran, R.M.S., however, considered it advisable to remove two suspected “carriers” from all contact with food and food vessels, and no further cases occurred.

Puerperal Sepsis. Nine cases were recorded during the year 1936, and four deaths are returned to the under-quoted districts:—

Dundalk	Urban	...	...	2
Drogheda	Rural	...	...	1
Ardee	Rural	...	...	1

Erysipelas. Five cases notified, and two deaths, were

returned. The five cases notified occurred in the following districts:—

Dundalk Urban	...	...	1
Dundalk Rural	...	...	4

Whooping Cough and Measles. As these diseases are not notifiable, the exact figures are unknown. No deaths are returned for Whooping Cough. Measles returns three deaths to under-quoted areas:—

Drogheda Urban	...	...	2
Dundalk Urban	...	...	1

Fly-borne Diseases. The anti-fly campaign was carried out in the early summer of 1936, and leaflets and posters issued to all schools in the county. In the Return of the Registrar-General there are 11 deaths from "enteritis and diarrhoea of children under 2 years" due to this disease, as against 15 deaths in 1935. Five of these deaths occurred in Dundalk Urban, 4 in Drogheda Urban, 1 in Ardee and 1 in Castlebellingham.

Purification of Shell-Fish. Complaints having been received regarding contamination of mussels exported from Carlingford Lough, investigations were made. It was stated that the mussels in question had been raised from beds at the northern side of the Lough. Suitable recommendations to prevent further complaints were submitted.

Carlingford Lough does not come within the area banned by the P.H. (Louth and Meath) Shell-fish Regulations, 1931, and inquiries carried out during the year showed that no infringement of these Regulations is taking place.

* * * *

The following table shows notification of Infectious Diseases received during 1936, by Dispensary Districts:—

	Enteric	Diphtheria	Scarlet Fever	Puerperal Sepsis	Erysipelas	Influenzal Pneumonia	Total
Dundalk Urban, Nos. 1 and 2	—	8	71	2	1	1	83
Dundalk Rural, Nos. 1 and 2	—	6	8	—	2	1	17
Drogheda Urban, Nos. 1, 2, 3	1	17	2	1	—	1	22
Drogheda Rural	—	—	—	2	—	—	2
Ardee	2	7	13	1	—	—	23
Dunleer	—	8	3	1	—	—	12
Termonfeckin	—	—	1	—	—	—	1
Castlebellingham	—	—	3	—	1	3	7
Barronstown	—	1	4	1	—	—	6
Louth	—	—	1	—	—	—	1
Ravensdale	—	—	12	—	—	—	12
Carlingford	—	3	6	1	1	—	11
	3	50	124	9	5	6	197

*

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%

*

VENEREAL DISEASE

The scheme for the confidential diagnosis and treatment of Venereal Disease has been published in the First Annual Sanitary Report, and still obtains.

The return of the number of patients who availed themselves of treatment in 1935 was not to hand in time for inclusion in the Annual Sanitary Report of that year. The number for the year 1935 is now returned as 11—males 9, females 2. The return for 1936 is 12—males 12, females nil.

HOSPITAL ACCOMMODATION FOR INFECTIOUS DISEASE

The hospital accommodation for treatment of infectious cases has been detailed in previous Reports and remains unchanged.

Point Hospital, Dundalk

The matter of this hospital was again raised in the Annual Sanitary Report for 1935, and recommendations made to have this hospital put into a satisfactory state. A recent inspection shows that this hospital is in a fit state —for demolition.

DISINFECTION

The County Disinfection state is similar to that published in the First Annual Sanitary Report.

The installation of a steam disinfecting plant in Drogheda Municipal District has been recommended in several Reports, but the recommendation has not yet been carried out.



THE TREATMENT AND PREVENTION OF TUBERCULOSIS

Deaths due to Pulmonary Tuberculosis are returned as 58, as against 80, 82, 86, 66, 71, 68 and 66 for the previous eight years.

Deaths due to other forms of tuberculosis are returned as 25, as against 16, 25, 20, 29, 11, 20, 24, and 15 for the previous eight years.

The combined figures for pulmonary and other forms of tuberculosis give a total of 83, which is equivalent to a death-rate of 1.3 per 1,000 of the population. The number of deaths due to pulmonary tuberculosis for the past five years, i.e., 66, 71, 68, 66 and 58, is smaller than any which have been returned since 1923. (Prior to 1923 exact returns (corrected for deaths occurring outside the county) are not available.)

The steady decline of the pulmonary tuberculosis death-rate has been maintained during 1936, the figure 58 being the lowest ever recorded in the County of Louth.

The following table gives the mean rates of the four years prior to 1923, the four years subsequent to 1928, and the past five years:—

	Rate per 10,000 of the Population per annum.		
	Pulmonary Tuberculosis	Other forms of Tuberculosis	Tuberculosis All forms
1924-27 inclusive	141.8	39.8	180.1
1928-31 inclusive	132.2	33.4	164.1
1932-36 inclusive	105.1	30.2	135.4

An analysis of these rates, which have been published in this chapter for previous years, demonstrating that while the rural rate is inclined to decrease, the urban rate tends to proportionately increase, is reprinted, with the addition of more recent figures now available,

Rate per 1,000 of Population		
Dundalk and Drogheda		
	Urban Districts	Rural Districts
1928	1.27	1.72
1929	1.72	1.69
1930	1.61	1.64
1931	1.83	1.64
1932	1.09	1.39
1933	1.46	1.53
1934	1.60	1.41
1935	1.19	1.49

A further analysis of the urban rate gives the following counts:—

Rate per 1,000 of Population		
	Dundalk	Drogheda
	Urban District	Urban District
1928	1.43	1.1
1929	1.5	1.9
1930	1.71	1.49
1931	2.00	1.65
1932	.79	1.42
1933	1.29	1.65
1934	2.07	1.10
1935	1.6	.8
1936	1.6	1.2

An analysis of the deaths due to tuberculosis recorded during 1936, corrected in regard to the various Dispensary Districts, gives the following figures:—

	Pulmonary Tuberculosis	Other Forms	Total
Dundalk, Nos. 1 and 2 Urban Districts	21	4	25
Drogheda, Saint Peter's, Nos. 1, 2 and 3 Urban	10	1	11
Dundalk, Nos. 1 and 2 Rural District	1	1	2
Drogheda, Nos. 1, 2 and 3, Rural Districts	—	—	—
Ardee	8	1	9
Dunleer	3	—	3
Termonfeckin	1	—	1
Castlebellingham	1	—	1
Louth	5	—	5
Barronstown	2	3	5
Ravensdale	1	—	1
Carlingford	3	2	5

An age analysis of the pulmonary tuberculosis mortality rate, as recorded in this Office, is as follows:—

Under 20 yrs.	20-30 yrs.	30-40 yrs.	40-50 yrs.	50-60 yrs.	60-70 yrs.
11	22	5	10	8	—

A further analysis for Dundalk and Drogheda Districts gives the following counts:—

DUNDALK

Under 20 yrs.	20-30 yrs.	30-40 yrs.	40-50 yrs.	50-60 yrs.	60-70 yrs.
10	10	3	4	—	—

DROGHEDA

Under 20 yrs.	20-30 yrs.	30-40 yrs.	40-50 yrs.	50-60 yrs.	60-70 yrs.
2	4	1	2	2	—

An analysis of the deaths due to Tuberculosis occurring in County Institutions, according to clerical returns in this Office, gives the following figures:—

	Ardee Ment. Hos.	Ardee Dis. Hos.	Dundalk Dis. Hos.	Drogheda Dis. Hos.	Louth Infirmery
Pulmonary	3	11	4	2	—
Other Forms	—	1	1	—	1

The under-quoted table, which has been published in all Sanitary Reports since 1931, demonstrating the decline in the number of uncertified deaths, and the net number of deaths registered since the inauguration of the County

Tuberculosis Scheme, is reprinted, with the addition of the figures for 1936.

	No. of uncertified deaths.	No. of Pulmonary Tuberculosis deaths.	No. of other forms of Tuberculosis deaths.	Total Number of deaths due to Tuberculosis.
1911	195	73	24	97
1912	170	83	29	112
1913	173	90	31	121
1914	175	73	39	112
1915	170	103	29	132
1916	151	88	16	104
1917	185	125	29	154
1918	158	94	29	123
1919	169	84	28	112
1920	135	74	25	99
1921	151	63	10	73
1922	143	60	22	82
1923	123	69	18	87
1924	145	112	24	136
1925	129	89	30	119
1926	108	71	24	95
1927	102	82	21	103
1928	112	80	16	96
1929	100	82	25	107
1930	77	82	20	102
1931	67	86	22	108
1932	74	66	11	77
1933	78	71	20	91
1934	72	68	24	92
1935	55	66	15	81
1936	61	58	25	83

From 1911 to 1922 the figures are those registered in the county. From 1933 onwards, they are corrected for deaths in institutions.

* * * *

Analysis for the nine-year periods, between 1928 and 1936, and the first complete nine years of the registration of cases in the T.B. Dispensaries, has been made. These

analyses were made in regard to various conditions to note if circumstances had changed. The results were not very instructive, but the housing analyses are published hereunder:—

DUNDALK

1914-1922, inclusive.

1 Room	1 Room and Kitchen	2 Rooms and Kitchen	3 Rooms and Kitchen	5 Rooms or more
7	68	77	117	64

1928-1936, inclusive.

1 Room	1 Room and Kitchen	2 Rooms and Kitchen	3 Rooms and Kitchen	5 Rooms or more
38	140	138	190	89

DROGHEDA

1917-1925, inclusive.

1 Room	1 Room and Kitchen	2 Rooms and Kitchen	3 Rooms and Kitchen	5 Rooms or more
4	37	46	35	13

1928-1936, inclusive.

1 Room	1 Room and Kitchen	2 Rooms and Kitchen	3 Rooms and Kitchen	5 Rooms or more
50	84	122	167	36

ARDEE

1914-1922, inclusive.

1 Room	1 Room and Kitchen	2 Rooms and Kitchen	3 Rooms and Kitchen	5 Rooms or more
2	18	17	14	5

1928-1936, inclusive.

1 Room	1 Room and Kitchen	2 Rooms and Kitchen	3 Rooms and Kitchen	5 Rooms or more
5	13	43	38	9

Age analyses and occupational analyses in regard to each of the registers have also been carried out, but on glancing over the figures I do not think they are of sufficient interest to merit printing. Roughly speaking, the tables would give similar percentages for both periods, and similar percentages to those which have been published elsewhere.

In this type of registration, which is compiled from the charts that have been filled in, during busy dispensary hours, figures of one sort and another are bound on occasions to have been omitted. Such omissions make statistics difficult to compile, and, when compiled, of no great value. Items which are never missing are serial number, name, address and diagnosis, and from the serial numbers alone it is evident that the number seeking treatment in recent years is very much greater than it was in the past.

The last serial number entered in the Dundalk register during 1927 is 814, in Drogheda 302, in Ardee 124. The last serial number entered in Dundalk during 1936 is 1494, in Drogheda 787, in Ardee 236. That means that from the time of the institution of registration in these various dispensaries (during 1913 in Dundalk and Ardee, and during 1916 in Drogheda) 1240 new patients attended up to the end of 1927. Whereas from the beginning of 1928 to the end of 1936, a period of nine years, 1277 new patients attended.

* * * *

The underquoted reports have been received from the Dental Surgeons responsible for treatment under the County Tuberculosis Scheme.

Francis Street, Dundalk.

I beg to report that I have examined approximately twenty patients during year ended 31st December, 1936, and in all cases extractions and scalings were necessary. The decay seemed to start with pyorrhoea, which eventually left the tooth impossible to fill. In all these cases the deciduous teeth should be extracted, and the remaining teeth scaled.

I recommend that when the teeth are extracted, for the health of the patient, some effort should be made to help them to procure artificial dentures. In the cases of patients insured, the National Health should be approached, now that it is unified, to carry on the work which the smaller societies did in this direction, and which must have been carried out at much less expense per person.

(Signed)

P. J. KIERAN, L.D.S. (Vic. Univ. Manchester).

20, Laurence St., Drogheda.
30th January, 1937.

During the last year I have treated approximately twenty patients from the Tuberculosis Clinics. The major number of those patients are between 30 and 50 years of age and were all suffering from pyorrhoea alveolaris, which required the extraction of all remaining teeth. Three patients who were in the early years—17 to 25—I treated very satisfactorily for Vincents Angina, and one patient for ulcerative stomatitis.

One cannot help but notice that with significant regularity, the existence of tuberculosis infection in the early stages is generally accompanied with oral infection. I regard the removal of this infection essential to the successful treatment of any systemic disease.

(Signed)

J. F. LIDDY, B. Dent. Sc.

* * * *

Return of the Number of Patients treated under the County Tuberculosis Scheme during 1937.

21

	Pulmonary Tuberculosis			Non-Pulmonary Tuberculosis			Total
	Children under 15 years	Other Persons		Children under 15 years	Other Persons		
		Males	Females		Males	Females	
I. Insured Patients.							
(i) No. remaining under treatment:							
(a) On January 1, 1936	—	48	42		6	3	99
(b) On December 31, 1936	—	45	44		9	5	103
(ii) No. of new patients treated during 1936:	—	17	14	—	3	2	36
(iii) No. of cases under observation at close of year 1936:	—	2	4	—	—	6	6
II. Other Patients.							
(i) No. remaining under treatment:							
(a) On January 1, 1936	47	38	47	30	13	6	181
(b) On December 31, 1936	50	42	50	33	16	8	199
(ii) No. of new patients treated during 1936:	8	10	15	8	3	3	47
(iii) No. of cases under observation at close of year 1936:	8	3	3	—	—	—	14

SUMMARY OF NOTIFICATIONS OF TUBERCULOSIS
RECEIVED DURING YEAR ENDED DECEMBER 31, 1936

Age Classification	Co. Health Dis.			Urban District		
	Males	Fe- males	Total	Males	Fe- males	Total
Under 5 years	—	—	—	—	1	1
5 years and under 15	1	1	2	7	7	14
15 years and unded 45	16	17	33	20	18	38
45 years and under 60	4	4	8	—	2	2
60 years and upwards	1	1	2	—	—	—
Total	22	23	45	27	28	55

The above figures include 17 cases notified by private practitioners that have not received treatment under the County Tuberculosis Scheme.

* * * *

MEDICAL INSPECTION, TREATMENT AND SUPERVISION OF SCHOOL CHILDREN

NORTH LOUTH AREA.

School.	Female.	Male.	Total.
Aughmeen N. School	18	23	41
Aldaghy N. School	33	35	68
Bush N. School	7	7	14
Ballinfull N. S.	39	33	72
Blackrock N.S.	70	57	127
Bellurgan N.S.	19	19	38
Carlingford (Nos. 1 and 2) N.S.	73	73	146
Carlingford (No. 3)	5	5	10
Christian Brothers' N.S., Dundalk	—	450	450
Convent of Mercy N.S., Dundalk	600	120	720
Castletown Convent N.S., Dundalk	450	—	450
Castletown De La Salle, N.S., Dundalk	—	450	450
Ccourtbane N.S.	25	34	59
Dundealgan N.S.	30	35	65
Dulargy N.S.	49	52	101
Drumsinnett N.S.	19	21	40
Kilcurry N.S.	55	55	110
Point Road N.S.	22	38	60
Faughart N.S.	24	36	60
Greenore N.S.	4	14	18
Knocknagoran N.S.	49	41	90
Kilkerley N.S.	60	64	124
Knockbridge N.S.	67	68	135
Kilcronev N.S.	21	20	41
Lcuth N.S.	73	71	144
Monksland N.S.	52	62	114
Muchgrange N.S.	50	62	112
Mullabuoy N.S.	35	33	68
Mullaharlin N.S.	37	37	74
Plaster N.S. (off)			
Rathcor N.S.	31	29	60
Rocktate N.S.	36	39	75
Rampark N.S.	53	60	113
Sheelagh N.S.	48	32	80
Saint Malachy's	415	263	678
St. Malachy's (Infants)	125	90	215
Saint Nicholas' N.S.	34	30	64
Stonetown N.S.	45	55	100
Tallanstown N.S.	70	58	128
	<u>2,843</u>	<u>2,671</u>	<u>5,514</u>

SOUTH LOUTH AREA.

School.	Female.	Male.	Total.
Ardee De La Salle N. School	—	337	337
Ardee Convent of Mercy N.S.	322	—	322
Ardee (E. Smith) N. School	4	6	10
Acclint	30	40	70
Belpatrick N. School	10	11	21
Boicetown N. School	39	37	76
Ballymakenny N. School	14	20	34
Charlestown N.S.	10	2	12
Callystown N.S.	74	68	142
Cartown N.S.	15	23	38
Collon N.S.	61	49	110
Cllon (E. Smith)	11	7	18
Convent of Mercy N.S., Drogheda	405	—	405
Christian Brothers' N.S., Drogheda	—	216	216
Darver N.S.	75	63	138
Drakestown N.S.	33	32	65
Drumcar N.S.	7	9	16
Dromiskin N.S.	65	68	133
Dysart N.S.	22	30	52
Dromin N.S.	39	22	61
Dunleer N.S.	78	90	168
Fieldstown N.S.	19	29	48
Kellystown N.S.	16	14	30
Kilsaran	106	102	208
Mell N.S.	52	30	82
Newtown N.S., Drogheda	15	21	36
Presentation Convent N.S., Drogheda	558	—	558
Philipstown N.S., Dunleer	33	36	69
Stormanstown N.S.	21	29	50
Stabannon N.S.	31	35	66
St. Mary's (Boys) N.S., Drogheda	—	290	290
Saint Patrick's N.S., Drogheda	220	220	440
Saint Peter's N.S., Drogheda	25	33	58
Saint Vincent's N.S., Drogheda	—	339	339
Tullyallen N.S.	38	27	65
Tenure N.S.	29	29	58
Termonfeckin N.S.	43	53	96
Willistown N.S.	43	43	86
Walshestown N.S.	25	20	45
	2,588	2,480	5,068

Grand Total: 10,582.

General Considerations

No schools in the County were closed during the year 1936 owing to prevalence of infectious disease.

Plaster National School, Mountpleasant, Dundalk, which was re-opened in 1934 has again been closed during the year under review, owing to fall in attendances.

Some general repairs were carried out in Collon National School, and further alterations are contemplated.

Stormanstown National School was partitioned into two equal parts and a fire-place installed in each compartment.

The desks in Drakestown National School, Ardee, are unsuitable and the sanitary convenience is too close to school premises.

During the year 66 visits to schools for systematic examinations in accordance with the Scheme of Inspection were carried out by the School Medical Officer. Eighty additional visits were made by the School Nurses in connection with follow-up work

Organisation and Administration

The Scheme, as detailed in previous reports, has undergone no modification during the year now being considered.

* * * *

The Physical Condition of School Children

Total Number of Children Examined.

Entrants	(age 6-7 years) ...	Boys 436	... Girls 400
Intermediates	(age 9-10 years) ...	Boys 278	... Girls 372
Leavers	age 12-14 years) ...	Boys 153	... Girls 171
Cases specially presented		... Boys 350	... Girls 438
		Total ...	Boys 1,217 Girls 1,381

Grand Total, 2,598,

2. Number of Children notified to parents as suffering from defects, and number receiving attention :

Defects.	Number notified.		Number receiving attention	
Enlarged Tonsils and Adenoids	...	217	...	145
Minor Surgical Operations	...	27	...	27
Eyes	...	259	...	222
Dental Caries	...	1248	...	621

The above table only includes cases entitled to free medical treatment, and 1,191 private notices have been issued recommending private treatment.

Of the 222 cases receiving attention for defective vision, 105 have received spectacles, one received an artificial eye and one was referred for hospital treatment.

Of the 27 minor surgical operations, 5 were operated on for phimosis, 3 for inguinal hernia, 3 for glands in neck, 4 for osteomyelitis, 1 for hare-lip, 1 angioma lip, 1 adenitis, 1 intussusception, 1 popliteal cyst, 1 inguinal cyst, 1 injured wrist, 1 abscess on thigh, 1 crushed finger, 1 cyst on eyelid, 1 abscess on leg, and 1 injured foot.

* * * *

3.

Statistical Tables

1. Dental Caries	...	...	...	...	1473	...	56.69%
2.—Diseased Tonsils and Adenoids (referred for special treatment)	...	...	...	...	237	...	9.12%
Diseased Tonsils and Adenoids (not referred for special treatment)	...	...	...	...	140	...	5.38%
3.—Eyes							
Defective Vision	...	...	...	...	289	...	11.12%
Strabismus	...	...	...	...	19	...	.73%
Other Diseases	...	...	...	...	17	...	.65%
4—Ears							
Otorrhoea	...	...	...	...	4	...	.15%
Wax	...	...	...	...	13	...	.50%
Other Diseases	...	...	...	...	6	...	.23%
5—Hearing							
Deaf	...	...	...	...	1	...	.03%

6.—Speech					
Defective Articulation and stammer	...	6	...	.23%	
7.—Mental Condition					
Dull or backward	...	5	...	.19%	
Mentally Deficient	...	3	...	.11%	
8.—Skin					
Ringworm	...	10	...	.03%	
Impetigo	...	16	...	.61%	
Eczema	...	2	...	.07%	
Other Diseases	...	18	...	.69%	
9.—Nutrition					
Sub-Nutrition	...	84	...	3.23%	
Mal-Nutrition	...	41	...	1.57%	
10.—Heart and Circulation					
Organic	...	17	...	.65%	
Functional Murmur	...	18	...	.69%	
Functional	...	58	...	2.23%	
Anaemia	...	75	...	2.88%	
11.—Lungs					
Bronchitis	...	64	...	2.46%	
Tuberculosis	...	2	...	.07%	
Suspected T.B.	...	14	...	.53%	
12.—Enlarged Thyroid					
	...	8	...	.30%	
13.—Rheumatism					
Myalgia	...	145	...	5.58%	
14.—Foot Gear					
Absent	...	38	...	1.46%	
15.—Uncleanliness					
	...	201	...	7.73%	
16.—Absence of Vaccination Marks					
	...	330	...	12.70%	

* * * *

ARRANGEMENT FOR TREATMENT AND SPECIALISTS' REPORT.

1.—MINOR AILMENTS.

Weekly school clinics are held in Dundalk, Drogheda and Ardee centres on Friday, Wednesday and Thursday respectively, and are largely attended by children referred to them by the School Medical Officer.

There were 1,124 attendances at Drogheda clinic; 1,004 at Dundalk, and 324 at Ardee, returned for year 1936.

The children attending the above clinics include cases of asthma, chronic bronchitis, worm infestation, cerumen, otorrhoea, impetigo, ringworm, eczema, blepharitis, sub and malnutrition.

Tonsils cases attend before and after operation for a course of tonic medicines and advice.

Children suffering from worm infestation are issued with Sartanin under the direction of the School Medical Officer.

2.—DEFECTIVE VISION.

Dr. Monahan has kindly submitted the following report :—

GREENMOUNT HOUSE,
NAVAN,

30th January, 1937.

I have pleasure in reporting favourably on the progress of the Eye Clinics held under the Louth School Scheme.

Most cases referred to me were suffering from refractive errors.

The incidence of infective conditions was extremely low; not one case of trachoma was seen in children. During the last twelve months I saw only one case of trachoma and that was in an adult.

My experience would show that it is a comparatively rare disease in Louth.

To facilitate the work of the clinic I would suggest that certain drugs should be provided as in some cases parents find difficulty in purchasing them.

(Signed), S. G. MONAHAN.

3.—DEFECTIVE TEETH.

The arrangements are as previously detailed. The school dental surgeons have submitted the underquoted reports and statistics :—

RODEN PLACE,
DUNDALK,

29th January, 1937.

I have the honour to submit the following statistics, report, and impressions of the working of School Dental Clinics for 1936.

Number of Clinics	...	...	24
Attendances of Patients	...	...	266
Temporary Teeth Extracted	...	...	651
Permanent Teeth Extracted	...	...	189
Number of Fillings	...	...	28
Scalings and Cleaning	...	...	25

Improvement in the oral health of the senior children is noticeable, due to previous treatment as junior patients.

(Signed), J. L. FARNON, L.D.S.,
Surgeon Dentist.

20, LAURENCE STREET,
DROGHEDA,

30th January, 1937.

I have the honour to submit the following report, together with statistics and general impressions of the past twelve months working of the Dental Clinics in this area.

During the year I have held 24 clinics.

Particulars of treatment :—

Total number of children attended	...	271
Permanent teeth extracted	...	87
Temporary teeth extracted	...	682
Total number of fillings	...	23
Scaling and Polishing	...	31
Silver Nitrate treatment	...	11

The general health of the children treated has been vastly improved, and from the educational point of view, they are bound

to appreciate the importance of oral and general hygiene as necessary to the possession of a good standard of general health.

Despite the excellent and encouraging work now being done by the Dental Profession, working under the various County Boards of Health in the Irish Free State, to improve the teeth of the children—is not one of the most deplorable reasons tending to retard such work—the fact that the public are not sufficiently interested, especially in prophylactic measures? It is even probable that the educationalists are unaware of the extent of Dental disease in juveniles. If dental education is to improve satisfactorily—is it not logical firstly to educate the adult in order to teach the child?

One avenue of education which seems obviously beneficial yet is largely unregarded is the dissemination of dental health knowledge to school teachers. At present an appreciable amount of time is allocated to games.

While a study of hygienics, especially oral hygienics is restricted to the public schools, and in the State Schools, it is evident that there is much to be done along these lines. Advanced as our educational systems are claimed to be to-day, there seems to be an added need for a more widespread cognition about health matters in general, and from the dental view point—dental knowledge in particular.

(Signed), J. F. LIDDY, B.D.S.

CARRICKMACROSS,
CO. MONAGHAN,

I have the honour to submit the following statistics for the Dental Clinics for 1936 :—

Number of Clinics	...	...	12
Attendances	...	...	84
Temporary teeth extracted	...	...	171
Permanent teeth extracted	...	...	29
Total number of fillings	...	...	8
Scalings and Polishings	...	...	17

The merits of the Scheme became more apparent each year, for both children and parents are now taking a definite interest in the care and preservation of their teeth, which heretofore was but found in very few cases.

The attendance at these clinics, however, is not all that could be hoped for, chiefly owing to the lack of bus or train service from the more distant areas. Those parents with whom

I have come in contact are, I am glad to say, becoming more anxious to obtain the full benefit of the Scheme, but are greatly burdened by the expense entailed at having to hire a car to bring perhaps only one child.

If arrangements could be made for one or two cars to call at the various rural schools to collect the children summoned to a Clinic, I am convinced that the parents would be agreeable to pay their share of such travelling expenses; and those in the outlying schools would derive a much better benefit from this excellent Scheme.

(Signed), M. M. SHEVLIN, B.D.S.

* * * *

In concluding this chapter on the school medical service, I wish to pay a special tribute to the teachers of Louth, whose co-operation, aid, understanding and encouragement have not only been of the greatest value in this section of my work, but in every branch of public health with which they have come in contact.



SCHOOL MEALS SCHEME

The School Meals Schemes in operation in the Dundalk and Drogheda Urban districts are reported to be generally satisfactory

In the Dundalk Urban District six Roman Catholic National Schools participate in the Scheme—the average daily number of children supplied with meals being 524.

In Drogheda Municipal District, the Scheme is availed of by all the Roman Catholic National Schools with the exception of St. Patrick's National Schools, Scarlet Street, and arrangements have been made to put the Scheme into operation in the latter Schools during the year, 1937. The total number of children receiving meals under the Scheme was 571.

MATERNITY AND CHILD WELFARE

The above Scheme continues to work under same arrangements as existed in 1933.

The Public Health Nurse for North Louth returns 125 primary visits, 300 repeat visits, and 200 visits to children under school age.

The Public Health Nurse for South Louth area returns 215 primary visits and 643 repeat visits.

The Scheme continues to work satisfactorily, particularly in those areas where confinements are conducted by rural midwives. The Health Visitor is usually well received and in almost all cases the mother welcomes her visit and advice.

There is a general improvement in Infant care and especially in methods of feeding.

The Free Milk Scheme is a great boon to necessitous parents and is much appreciated. There are, however, areas in South Louth where no arrangements exist to supply milk under this scheme and where there are young children whose parents are only in receipt of unemployment assistance.

In Dundalk, Ardee, and Castlebellingham, the Jubilee Nurses carry out the duties under the Maternity and Child Welfare Scheme, and in Drogheda, the mothers and babies are under the care of the French Sisters of Charity.

All the rural areas with the exception of Ardee and Castlebellingham are under the charge of the Public Health Nurses.

* * * *

The under-quoted table gives a summary of the returns received from the Nursing Associations of Dundalk, Ardee, and Castlebellingham districts under Maternity and Child Welfare :

(a) Number of patients on books on 31st December, 1ff935,
classified as follows :—

Mothers.	Babes.	Children under 5 years.
514	237	949

(b) Number of patients on books on 31st December, 1936,
classified as follows :—

Mothers.	Babes.	Children under 5 years.
289	231	43

(c) Total number of patients visited during the year, 1936,
classified as follows :—

Mothers.	Babes.	Children under 5 years.
		1936 :
2101	1406	2658

(d) Total number of visits paid during the year—15,330.

(e) Number of cases in which milk or other food is being given—
137.

MIDWIVES (I.) ACT, 1918

LIST OF CERTIFIED MIDWIVES IN PRACTICE IN THE COUNTY.

34

(1936)

Reg. No.	Name.	Address.	If Married Since Registration.	If holding any Public Appointment.
			Former Name and Address.	
42	Miss Annie Barnwell	Old Hill, Drogheda	.....	Dispy. Midwife
4965	Mrs. Monica Barry	44, M'Swney St., Dundalk	Miss M. Dullaghan, Dromiskin	
2924	Mrs. Catherine Bailey	Annavackey, Hackballscross	Miss C. Brennan, Hackballscross	
2821	Mrs. Mary Birney	Seatown, Dundalk		
4044	Miss Mary Callan	Lawlesstown, Dunleer		
5606	Miss Magdalen Carragher	District Hospital, Ardee		Dist. Hosp., Ardee
2145	Mrs. Ellen Carr	Thomas St., Drogheda		Dispy. Midwife
4449	Miss Margaret Dardis	District Hospital, Drogheda		Dist. Hosp., Drogheda
1569	Mrs. Kate Donaghy	Drumnacarra, Mountpleasant		Superannuated
257	Mrs. Mary A. Duffy	St. Mary's Road, Dundalk		
1930	Mrs. Annie Eccleston	Castleview, Carlingford		Dispy. Midwife
1526	Miss Monica Farrell	15, Dyer St., Drogheda		
1287	Miss Mary Finnegan	Roseville, Dunleer		Dispy. Midwife
5527	Miss Kathleen Furlong	District Hospital, Ardee		Dist. Hosp., Ardee
4415	Miss Annie Ginnerty	Seatown, Dundalk		
3569	Miss Cecelia Hackett	District Hospital, Drogheda		Dist. Hosp., Drogheda
2513	Mrs. Kate Hennessey	116, Chord Road, Drogheda		
3589	Mrs. Jane Higgins	Castlebellingham	Miss Jane Hanratty	Dispy. Midwife
481	Mrs. Mary Houston	Anne St., Dundalk		
5210	Mrs. Mary P. Kelly	54, Scarlet St., Drogheda	Miss F. Mathews	
4172	Miss Mary Kelly	Grangebellew, Dunleer		
1047	Mrs. Julia Kinahan	Dromiskin, Dundalk		
2008	Mrs. Margaret M'Cann.	District Hospital, Dundalk		Dist. Hosp., Dundalk
4611	Mrs. Mary T. M'Court	1, M'Swney St., Dundalk		
3991	Miss Frances M'Clure	Cottage Hospital, Drogheda		Cot'ge Hosp., Drogheda
5990	Miss Kathleen M'Donnell	District Hospital, Ardee		Dist. Hosp., Ardee
1134	Mrs. Kathleen M'Evoy	Dublin St., Dundalk		
432	Mrs. Maria M'Gahan	Chapel St., Dundalk		Dispy. Midwife
5044	Mrs. Rose Anne M'Genis	Lisdoo, Dundalk		
1347	Mrs. Margaret M'Shane	Newry St., Carlingford		
4828	Mrs. Mary Anne Murphy	Lower Faughart, Dundalk		Dispy. Midwife
1152	Mrs. Ellen Murphy	54, Mary St., Drogheda		
2009	Mrs. Mary Moonan	Castle St., Ardee		Dispy. Midwife
4607	Mrs. Elizabeth Mooney	Newtown, Monasterboice	Elizabeth Mooney, Monasterboice	Dispy. Midwife
1943	Miss Brigid Morgan	Louth Village, Dundalk		Dispy. Midwife
9112	(Eng.) Mrs. Margaret E. Morgan	Dromintee, Co. Armagh		
2377	Mrs. Mary Anne O'Brien	Bredin St., Drogheda		
3870	Mrs. Brigid O'Donoghue	Bachelor's Walk, Dundalk	Miss Brigid M. Carpenter, Dromiskin	
3929	Mrs. Mary Parks	Culhane St., Dundalk	Miss Mary M'Gahan, Chapel St., Dundalk	Dispy. Midwife
4477	Mrs. Mary Quigley	Elnagreen, Inninskeen, Louth		Dispy. Midwife
5220	Miss Margaret M. Reynolds	Cottage Hospital, Drogheda		Cot'ge Hosp., Drogheda
5570	Miss Ellen Reynolds	Bull Ring, Drogheda		
3830	Miss Margaret Savage	Carlingford, Dundalk		
5018	Mrs. Mary Smith	Loughboy, Mell, Drogheda		
2792	Mrs. Mary Anne Shiels	Blackrock, Dundalk		
3608	Miss Annie Tallon	Clogherhead, Drogheda		Dispy. Midwife
3692	Mrs. Ellen Toal	Muchgrange, Greenore		
921	Mrs. Mary Tully	Chord Road, Drogheda		
3140	Mrs. Margaret Ward	Barn Road, Dunleer		
3087	Mrs. Margaret Wryan	Bridge St., Ardee		
5279	Miss Gladys M. Yorke	District Hospital, Ardee		Dist. Hosp., Ardee

Notified Change of Address—

Mrs. J. Kinahan, Parnell Park, Dundalk, to Dromiskin, Dundalk.
Mrs. K. Donaghy, Dulargy, Ravensdale, to Drumnacarra, Mountpleasant.
Mrs. Rose A. McGenis, Castleblayney, to Dundalk.
Mrs. Mary Moonan, Market St., Ardee, to Castle St., Ardee
Mrs. Brigid O'Donoghue, Bridge St., Dundalk, to Bachelor's Walk, Dundalk.
Mrs. Ellen Toal, Dublin, to Muchgrange, Greenore, Dundalk.

Left County during 1936—

Miss Furlong, Dist. Hospital, Ardee.
Miss Yorke, Dist. Hospital, Ardee.

Ceased Practice during 1936—

Mrs. Gyles, Bachelor's Walk, Dundalk.
Mrs. O'Donoghue, Bachelor's Walk, Dundalk

Deaths—

Mrs. Winifred M'Caffrey, Drogheda.

The Assistant Inspector of Midwives (Miss McHugh) carried out 57 routine inspections and 19 special visits during year 1936.

Miss Connolly, the Assistant Inspector for South Louth returns 44 routine inspections and 20 special visits during year 1936.

Swabs were taken in the case of Midwives in attendance on Puerperal Sepsis cases, and sent for bacteriological examination.

The under-quoted table gives the number of notifications received from midwives, in compliance with the Rules of the Central Midwives Board, during the year 1936 :—

Still-births	...	33
Medical Assistance		105
Death of Mother		4
Death of Baby	...	8
Puerperal Sepsis	...	9
Artificial Feeding	...	21

* * * *

The under-quoted interesting report was received from Dr. J. V. Ryan, who acted for the County Medical Officer during the annual leave period :—

Report of Inspectional Tour of Midwives in Louth during August, 1936

It has often occurred to me that the usefulness and importance of the Midwife in our social life is not fully realised by the general public. The life of the Maternity Nurse is devoted to the welfare of the female population in an area or district, and often under very trying circumstances. We have all read of the role played by the maternity nurses as portrayed by great writers, but perhaps have not considered that the shortcomings of these characters—based upon real life—were a consequence of the general lack of medical knowledge of the day. Medical science has advanced, thanks indeed to the fuller knowledge of public health matters now possessed by the medical profession and through it, by the general public, with the result that the maternity nurse of to-day is the highly efficient servant that all acclaim her to be, and deservedly so.

She has the welfare from the public health point of view of the newly-delivered woman in her hands; and has besides, the scientific knowledge necessary to enable that woman to rear

a healthy child that will be no burden, but rather a useful citizen of the State.

Infant Mortality is, unfortunately, in our days still a problem that all medical men and medical institutions must deal with, and who is nearer to the problem, with her advice and training, than the midwife? It is, therefore, not surprising to find that the training of the maternity nurse is an arduous one in Ireland—and even much more so in some countries like Holland—so that, when fully trained and qualified, she is the reliable assistant of the medical practitioner, in the prevention of puerperal disease.

During the year 1936 I made a tour of Inspection of the Midwives in Louth, and must say that I felt greatly impressed by their cleanliness and efficiency. Personal cleanliness in every case seemed to be the conspicuous feature and though, in some cases a few items of the midwife's armamentarium might be missing, what remained conformed to all our hygienic ideas of cleanliness. The premises in which the midwives live were, I must also add, on the whole satisfactory.

There are some points, however, I should like to mention regarding some deficiencies—now, I am confident, rectified—which I consider of some importance, that might help to “make assurance doubly sure” :—

- (1) Every midwife has, or ought to have, a special case book, and should watch when this is about to be completed, so as not to enter cases in ordinary note books, which is unsatisfactory. There were two cases only where no proper Register was kept, and in one of these cases, the bag was untidy.
- (2) Two bags are now prescribed by the C.M.B. Rules for midwives, and while the maternity bag proper was to be found in all cases, the second bag took the form (with a few exceptions) of a type not conforming to our ideas of hygiene. An idea seems to be prevalent that the second bag (for dressings, etc.) is not so necessary as the first, which is not so, for the post-partum treatment of a woman is of the highest importance, because during the puerperium she is most susceptible to puerperal sepsis, and so, all applications, dressings, etc., must be thoroughly sterile, and therefore confined to a sterile container—such as an attache case, which can be easily cleaned and lined with removable and sterile material.
- (3)—In a number of cases Temperatures were recorded in the ordinary Case Book. I think this unsatisfactory for there are special Pulse-Temperature record books for this purpose, and should be used. In a hospital one does not use the Case Book for Clinical Phenomena, for all such are recorded on special Charts, etc.

- (4) In one case these books, etc., were kept in the Maternity Bag. I mention this, for I think it is a matter of grave importance. Nothing should enter a midwife's bag that is not sterilisable and a book can best be sterilised by being burned. The inside of a maternity bag is a sacred place where no dirt should enter, nor even the human hand without thorough sterilisation.
- (5) Silver Nitrate solution was absent in a case, though otherwise very satisfactory. Every midwife should remember that Ophthalmia Neonatorum is a notifiable disease, and is one important cause of blindness. Silver Nitrate solution used at birth is a prophylactic and helps to prevent this, and furthermore, should be kept in brown bottles, for it is decomposed by the actinic qualities of white light. In this case also the approach to the premises ((otherwise satisfactory) was almost inaccessible, but in country places one cannot very well pick and choose where one must live.

In every other respect the midwives were quite satisfactory and the comparative rarity of Puerperal Sepsis in Louth proves this, and reflects great credit on the medical practitioners of that County, and on the co-operation between physicians and midwives.

I would add that midwives ought not to take holidays during inspection time, and that those who have ceased to practice should notify the County Medical Officer of Health immediately in writing, to that effect.

(Signed), J. V. RYAN, M.B., B.Sc., D.P.H.



NOTIFICATION OF BIRTHS ACT

The number of births notified under this Act was 1,230, being 98% of the total number of births (1,256) returned by the the Registrar-General for the year under review.

VACCINATION

Number of defaulters by areas (County Health District).

Dundalk Nos. 1 and 2 (Rural)	...	...	29
Drogheda Nos. 1, 2 and 3 (Rural)	...	...	92
Ardee	...	...	112
Carlingford	...	...	91
Ravensdale	...	...	22
Termonfeckin	...	...	15
Dunleer	...	...	15
Louth	...	...	10
Barronstown	...	...	13
Castlebellingham	...	...	10

Number of defaulters by areas (Urban Districts).

Dundalk Nos. 1 and 2 (Urban)	...	68
Drogheda Nos. 1, 2, and 3 (Urban)	...	655

The above return for Louth County Health District and Drogheda Urban District covers period ended 31/12/1936. The return of Dundalk Urban District does not include last quarter ended 31/12/1936.

The following table shows details of the vaccination state as recorded by the School Medical Staff during 1936 :—

Number of Children Unvaccinated, grouped in Districts

NORTH LOUTH.

Dispensary Districts.	Number Inspected.	Number Unvaccinated.
Dundalk No. 1 Dispensary District	457	... 49
Dundalk No. 2 Dispensary District	392	... 43
Ravensdale Dispensary District	35	... 3
Carlingford Dispensary District	124	... 10
Barronstown Dispensary District	57	... 11
Louth Dispensary District	47	... 7

SOUTH LOUTH.

Dispensary Districts.	Number Inspected.	Number Unvaccinated.
St. Peter's No. 1 Dispensary District	529	... 134
St. Peter's No. 2 Dispensary District	53	... 11
St. Peter's No. 3 Dispensary District	136	... 17
Termonfeckin Dispensary District	103	... 16
Dunleer Dispensary District	—	... —
Ardee Dispensary District	184	... 29
Castlebellingham Dispensary District	—	... —

The Registrar-General returns 509 successful vaccinations as having been carried out in the County during the year 1936.



WELFARE OF THE BLIND

The Scheme for promoting the welfare of the blind in the County was published as an appendix to the Annual Sanitary Report for 1928.

The underquoted return has been received by my Office from the Louth Board of Health and Public Assistance.

NUMBER OF BLIND PERSONS REGISTERED UNDER THE ABOVE SCHEME DURING YEAR ENDED 31/12/1936.

	5 years. and under 15 years.	15 years. and under 30 years.	30 years and upwards.	Total.
In Institutions	Nil.	3	6	9
Number assisted in own homes:				
(a) Single or widowed persons :				
Males	Nil.	Nil.	Nil.	Nil.
Females	Nil.	Nil.	Nil.	Nil.
(b) Married blind men	Nil.	Nil.	Nil.	Nil.
(c) Married blind women	Nil.	Nil.	Nil.	Nil.
Totals	Nil.	3	6	9

Expenses under the Scheme, allowances to blind persons in their own homes and for the maintenance of persons in institutions for year ended 31st December, 1936 :—

Actual payments — £108 3s. 0d.

LABORATORY

A comprehensive scheme for the examination of pathological and bacteriological material has been adopted by the Louth Board of Health and Public Assistance. Copies of the scheme have been forwarded by this office to all concerned.

COMMON LODGING HOUSES

Bye-laws governing Common Lodging Houses are in operation in the entire County, and all Common Lodging Houses inspected were reported on as being in a satisfactory condition.

OFFENSIVE TRADES

These are subject to inspection and no complaints have arisen during the period under review.

BURIAL GROUNDS

The under-quoted return has been received from the Louth Board of Health and Public Assistance :—

Number of Burial Grounds in County Louth, vested in Board of Health and Public Assistance as a Burial Board and having caretakers appointed and paid by the Board—Twenty.

Number of Burial Grounds closed during year 1936—Nil.
Number of Burial Grounds opened during year 1936—Nil.

A new burial ground was opened in Haggardstown, Dundalk, during 1936 by the late Very Rev. Canon Donnellan.

There are 20 Caretakers paid nominal amounts by the Louth Board of Health, but all of these are not vested in the Board.

SALE OF FOOD AND DRUGS

The administration under this head is similar to that detailed in previous years.

Nominal Roll of Food and Drugs Inspectors, Garda Siochana, Co. Louth.

Name.	Rank.	Reg. No.	Station.	Areas Appointed.
John J. Smith.	Sgt.	6192	Dunleer.	Castlebellingham and Dunleer.
Thos. Glennon.	Gda.	559	Ardee.	Ardee and Collon.
P. McElhannan.	Gda.	6035	Clogherhead.	Clogherhead.
J. J. Leheny	Gda.	6692	Dundalk.	Dundalk and Blackrock
M. Sheeran.	Sgt.	1965	Ravensdale.	Ravensdale.
P. Casey.	Gda.	4722	Louth.	Louth and Hackballscross.
P Darcy.	Gda.	527	Carlingford.	Carlingford and Omeath.

* * * *

I have examined the situation in regard to work carried out under the Sale of Food and Drugs Acts, on previous occasions.

Drogheda with a population of 14,495, has a specially trained whole-time Sanitary Officer carrying out these duties. In Drogheda town during 1936 there were 151 samples of milk taken; in the rest of the County, including Dundalk, with a population of 49,799, there were 67 samples of milk taken.

PUBLIC MILK SUPPLY

“The subject of milk is nearly as large as that of public health; in its importance milk is only second to water.”

(Dr. H. Leslie Cronk.)

Milk As A Food

Milk is without doubt a very fine food and a very important food to young and old. Many of the children of this county already show benefit from the various free milk schemes. Dietary deficiency is one of the common causes of ill-health, particularly during infancy, childhood and adolescence. The lack of adequate nourishment during these earlier periods of life is responsible for a good deal of ill-health later.

“A food which contains all the materials necessary for the growth and maintenance of life in a form ready for utilisation by the body is obviously of high value.” (British Milk Advisory Committee.)

The frequently-quoted research of Dr. Corry Mann leaves little to be said concerning the value of milk as a food. His investigations concerned five hundred boys, aged from seven to eleven years, and covered a period of four years. The introduction to the report issued on this research states: “The investigation shows clearly that the nutritive value of a dietary which was originally chosen with every regard to the welfare of the children to be reared upon it, could be strikingly improved by additions, which, in a quantitative sense, were small. It is startling to learn, as we do now for instance, that the addition of one pint of milk a day to a diet, which by itself satisfied the appetite of growing boys fed upon it, could convert an average annual gain of weight of 3.85 lbs. per boy to one of 6.98 lbs., and an average annual increase in height from 1.84 inches to 2.63 inches. This unmistakable betterment in nutrition was proved by trial to be due, not to the relatively small increase in the fuel value of the dietary, not to the extra protein supplied in the milk, but rather to the more specific qualities of milk as a food.

“It is of the first importance to notice that the improved gain in weight and height, taken as the measurable character in this inquiry, were found to be accompanied regularly by improved general health and ‘spirit.’”

This report, which was published in 1926, showed that by augmenting the “basic” diet with extra heat-producing units in the form of sugar and fats, and extra vitamins in the form of

watercress, and extra proteins, an increase in weight and height was produced. However, not one of the additional diets, with the exception of water-cress, furnishes results at all comparable to that of one pint of fresh cow's milk per day.

Research on similar lines has been carried out in the U.S.A. and elsewhere, and one of the most interesting unanimous observations is that the improvement in health is mental as well as physical.

More recent investigation carried out by the Rowett Research Institute showed that children receiving either whole or skimmed milk gained practically the same amount of weight and height. A good deal of discussion has at one time and another centred around these experiments. It has been seriously suggested that as water-cress, whole and separated milk all proved to be valuable additions to a child's diet, the common factor which was responsible was the increased consumption of water, and not necessarily salts or any accessory food. If this view is correct, it indicates that the average child does not consume sufficient liquid in one form or another, an opinion which I have heard some elder physicians express years ago. The results were summed up in 1929, as follows: "Water-cress, milk, whether 'whole or skimmed—useful. Sugar, biscuits, margarine, casein—'useless. Butter—slightly useful."

Be it remembered, however, that one pint of milk contains half the amount of food required by a child for twenty-four hours. Further, the milk half is the more important, as the rest can be made up cheaply. Yet, though milk is such an excellent food—an ideal food—it has been observed that the poor do not drink it to any extent. This is not because it is considered expensive, but because, being a drink, it is not regarded as good value as a food. Money is spent on heavier foods of much less nutritional value. This is surely a matter which, like many more, could easily be righted by teaching and properly directed propaganda, when the time comes.

Enough of milk as a food: it required no research to prove that milk as an addition to the diet of a poorly nourished child would be of vast benefit. The legislature which gives the advantages of free milk to the public acts with wisdom, and in giving a preference for tubercle-free milk sets a headline.

Milk As A Poison

While, however, advocating augmentation of the diet with milk of certain groups of school-children, and poorly-circumstanced pre-school children, infants and expectant mothers, I personally would not lend my support to a "Drink More Milk" campaign, at this juncture. It has been suggested to me on on occasions that the Louth Department of Health should advocate the consumption of milk by the public, should point out fully and with force that milk is a model food, containing health bestowing vitamins, etc.

In the Milk and Dairies Act, which comes into operation on 1st January, 1937, we have the means of working towards a clean and wholesome milk supply. This Act, and the Regulations framed under the Act, I propose to discuss briefly in a later part of this chapter. When these enactments are fully and efficiently carried out, and the results are capable of being recorded, the time will be opportune to advocate the greater use of milk in the homes of the people.

I have read at some time or another that investigations showed that country children drink definitely less milk than town and city children. I wonder why this is so? Is it, perhaps because they are better acquainted with the conditions under which milk is often prepared for sale?

The medical profession in general, in many countries, has evinced no great enthusiasm in furthering the wholesale consumption of milk by all and sundry—at least not until the safety of the milk was guaranteed. Perhaps of the many comments which I have to hand on this matter, the following most aptly epitomises the situation: “If legislation can guarantee that milk will always be a food and never a poison, we could recommend ‘people to drink it.’

“While we have the ever-present danger of tuberculosis, the ‘intermittent danger of milk epidemics and the frequent admixture of cow-dung and other sundries, we are somewhat chary ‘of advertising this perfect food.’

The above appeared as editorial comment in an English medical journal some years ago.

The following letter, which appeared in “The Medical Officer,” of 11th November, 1933, and which I published in the 1933 Report, is sufficiently relative to merit re-printing:—

BOVINE TUBERCULOSIS

To the Editor of “The Medical Officer.”

Sir,—According to a report published in several of the newspapers of the 19th ult., one of the speakers at a recent meeting of the British Dairy Farmers’ Association informed his audience that “the talk of conveying bovine tuberculosis to human beings by milk was all humbug.”

To protect the public from this misleading and inaccurate statement, we desire to put on record the following propositions as established beyond reach of challenge:

- (1) That raw milk as as present distributed for human consumption shows on an average the presence of living tubercle bacilli in some 6 to 7 per cent. of the specimens examined:

- (2) that about 2,000 children die annually from tuberculosis infection of bovine origin, while many others suffer disabling and deforming illnesses:
- (3) that these disasters are due mainly, if not entirely, to the infection of children through the milk supply: and
- (4) that pastuerisation properly performed, or failing this, boiling of the milk, reduces the risk of tuberculosis and other milk-borne infections to the vanishing point.

For these propositions there exists a body of well-authenticated evidence, and the public interest demands that they shall be plainly stated and authoritatively affirmed.

We are, Sir,

Your obedient servants,

DAWNSON OF PENN.

HORDER.

MOYNIHAN.

FREDERICK T. G. HOBDAY.	} Member of the People's League of Health's Bovine Tuberculosis Committee.
WILLIAM G. SAVAGE, M.D.	

2nd November, 1933.

This letter, as I stated in 1933, refers to England, Scotland and Wales, but the menace of bovine tuberculosis also exists in the I.F.S.

I opened this chapter with a brief consideration of milk as a food, and I now propose to show how this food is often a poison. Milk since the beginning of recorded history appears to have always held an honoured place in the diet of man. Nobody dreamt of questioning its wholesomeness. It has been used as a symbol of purity and kindliness. Perhaps, however, the nasty things which were said about milk were not allowed ever to get into print. I note one record, and that as far back as 1599, which would suggest that more astute minds even then suspected that this fluid was not always what it seemed. In 1599 A.D., the Senate of Vienna prohibited the sale of milk, butter or cheese during an epidemic, because it was considered that milk caused the infection.

Perhaps, also, a slightly critical tone may be detected in the following extract from an encyclopaedia, published in 1739—much of which might be considered fairly good advice still. "Milk from old cows or cows raised for beef is not good. Good milk is either white or yellow, not green or blue: cows must be properly fed and the straw must be clean; milkmaids must keep themselves clean, utensils must be kept clean, and after milking the milk should be filtered through a cloth: uncleanly milk turns sour."

When medical officers of health and others, comparatively recently, pointed out the dangers of unsupervised milk supplies, it naturally came as somewhat of a shock to the public. The public now understands the situation in a general way which is enough, but the dairyman should have a more detailed knowledge of this matter than one would define as general. Many dairymen have not yet got a grip of what clean milk means. It is easy to see why this should be so, and it merely indicates the necessity for education of dairymen in this matter. However, it is not so easy to understand why anyone should be impatient of learning the basic principles of his trade. At one time there were disputes concerning the role played by micro-organisms and opposition was put up, even by some members of the medical profession, against the necessity for asepsis some sixty years ago. Those days are now past. In the year 1936 A.D., no one disputes the part played by micro-organisms in causing disease.

The dairyman must understand that, apart from contamination of a grosser nature, such as dung, which dissolves freely and easily, without being visible in the opaque fluid milk, clean milk means a small number of micro-organisms per given quantity of milk. I have sometimes gathered the impression that to talk of dung, dissolved and invisible, was bad enough, but that when the conversation went on to forms of life which can only be seen through the microscope, the dairyman regarded it as fantastic. Yet it is micro-organisms in milk which constitute the chief danger.

Milk is used in the laboratory for the purpose of growing bacteria and forms an ideal breeding ground for micro-organisms. Many of these small forms of life, known as micro-organisms, germs or bacteria, are harmful to man. The germs may be due to disease from which the cow is suffering. Even if the milk comes from the healthiest of animals, however, the road from the milking shed to the table is long and precarious. Germs may be introduced at any stage of the journey. It will therefore be convenient to divide the diseases which milk may convey into: (a) diseases primarily due to ill-health of the cow, and (b) diseases due to contamination of milk.

(a) **Diseases due to ill-health of the Cow.** The principal diseases which cattle and man both suffer from are tuberculosis, brucella abortus infection and streptococcal infections, while anthrax, foot-and-mouth disease, actinomycosis and cow-pox may be listed. Food poisoning following consumption of milk from cows suffering from intestinal disorders has also been reported.

Tuberculosis. The tubercle bacillus was first noted to be present in milk by Professor Bang in Denmark in 1884. For some years authorities held different views as to whether bovine tuberculosis was pathogenic to man, but since as comparatively remote a date as 1901 there has been no doubt on the subject. Bovine tuberculosis is highly pathogenic to man and particularly to the young of man.

The period of this report is 1936, and at a not very distant date people will wonder why such delay in taking effective action

against the spread of bovine tuberculosis was permitted. They will read our statistics and will note that not only was the infection allowed to spread in our dairy herds, but the dairy herds were permitted to form a constant source of infection, with fatal or crippling disease to the children.

Tuberculosis in cattle is stated to be difficult to detect by ordinary examination, except when the disease is advanced, and it has been remarked that the milk secretion is often being grossly contaminated with tubercle bacilli for months before the animal is slaughtered. I do not know if it is possible to say with any exactness what percentage of cattle in this county are affected with tuberculosis, but I could roughly compute the number of people who die from bovine tubercular infection. A lot of research has been carried out to demonstrate the incidence of bovine tuberculosis in man, and the following table is typical:—

Pulmonary Tuberculosis	1.3 per cent.
Bronchial Glands	5.5 per cent.
Abdominal	50.0 per cent.
Cervical Glands	46.0 per cent.
General	16.0 per cent.
Meningitis	18.0 per cent.
Bones and Joints	20.0 per cent.
Genito-urinary	18.0 per cent.
Lupus	50.0 per cent.

(Cobbett.)

Many other workers give similar results, and it has been estimated in many surveys that about 7 per cent. of the total tuberculosis death-rate is due to the bovine bacillus. It may be taken as reasonable to state that at least one-third of the children under five years of age who die of tuberculosis other than pulmonary, obtained the infection from cows' milk. Also, of course, the theory has been put forward that all tuberculosis in man is due to the bovine bacillus, which gradually changes on a new "soil" into the human bacillus. It may, however, I think, be accepted that the types of the myco-bacterium tuberculosis are constant over long, long periods of time, and that the separate evolution of the human type and the bovine type go back very, very far. Even so, the case against the cow is bad enough.

Death counts are not the whole picture. There is a much larger count; the majority who become infected with bovine tuberculosis but do not die. They must cost the State an immense amount of money in curing or endeavouring to cure them. Many are crippled, others grow up suffering from chronic ill-health, handicapped for the remainder of their lives. In money, this latter class must also cost the State an enormous sum. Now, it is generally held that repeated doses of tubercle bacilli are highly dangerous to the consumer. I mention this specially as the argument was seriously put forward at one time that the immunising power of tuberculous milk conferred a benefit to the public. It is as well to examine all theories which may be advanced publicly or privately to defend the consumption of disease organisms.

"Some authorities on tuberculosis are confident that the date of the first infection in all fatal cases is below **four** years of age, and that when children are protected from infection till they are over that age, the risk to life is very much reduced, and that if the date of infection is postponed till the child is over **seven** years of age, then the risk to life is small.

"This does not apply to primitive peoples, and is the result of civilisation and our increased inherited natural immunity. The data on which these authorities base this opinion may be correct, and it is worthy of the most careful enquiry, as if it is true, then the importance of prevention of all risks of infection till **seven** years have passed must be evident to all."

(Gordon Tippet.)

Now, the source of bovine tubercle bacilli is mainly from the cow suffering from early or late infection of the udder, in that tuberculosis of the milk secreting glands will result in bacilli in the milk secretion. Tubercle bacilli may, however, frequently find their way into the milk from sputum, swallowed by cows suffering from tuberculosis of the lungs, and passed into the faeces, or from faeces of cattle suffering from tubercular ulcerative enteritis. The entry of the bacilli into the milk may thus be from the dust of the cowshed containing dried dung or sputum, from dried excreta of ungroomed dirty flanks or tails, from soiled clothes or dirty hands of the milker. It is on record that cows which are apparently healthy have passed tubercle bacilli pathogenic to laboratory guinea-pigs.

Contagious Abortion (Bang's Disease). From information to hand in my office, this disease can hardly be termed rare or uncommon. The prevalence of contagious abortion in dairy herds is attracting increasing attention in many countries. The characteristic symptom in cows is abortion or premature delivery of the foetus. Within three or four days of an abortion due to the causal organisms (*Brucella Abortus Bovis*), the germs of the disease are present in the milk. The milk-producing glands then furnish a reservoir for the germs, and some authorities state that this condition is present for the rest of the beast's life.

Contagious abortion is, I read, "the most serious bovine disease from the economic standpoint, because of loss of calves and milk and its frequent sequel in sterility.

"A system of veterinary inspection, with further research into the incidence of the disease, may in time assist in discovering methods for its control and reduction."

That, however, is not what interests public health departments so much, as that the causal organism of contagious abortion in cattle may produce Undulant Fever (Brucellosis) in man. Many cases are now on record; indeed, epidemics of this disease, stated to be milk-borne, are reported, and these I shall briefly note in a subsequent section of this chapter.

In 1886, Sir David Bruce isolated the causal organism of Undulant Fever (Malta Fever, Mediterranean Fever) from human

cases. In 1905, Zamitt proved that the same germ (*Brucella Melitensis*) was enzootic in the goats of Malta. The disease in Malta was practically eradicated following the British Commission on Malta Fever, when the use of unboiled goats' milk was prohibited. In 1887, Professor Bang discovered the causal organism of contagious abortion in cows (*Brucella Abortus Bovis*).

It was not recognised for many years that the germ of contagious abortion in cows could cause undulant fever in man, just in the same way as the germ of the Malta disease conveyed by the goats' milk caused undulant fever in man.

However, in the United States and other countries, cases of undulant fever were diagnosed in localities where goats' milk as a vehicle of infection could be eliminated. It was then, bit by bit, proved that the various micro-cocci, known as *Brucella*, responsible for abortion in cattle, sheep, pigs and horses could also be the causal germs of undulant fever in man.

In 1918 Alice Evans aptly wrote in regard to the germs which cause contagious abortion in cattle, and Malta fever: "It was as 'if two brothers had been adopted by different families and given 'different surnames and for twenty years no one recognised the 'similarity in the boys, because they were seen at different times 'and different places."

The following quotation carries the history of this matter a stage further: "It was not till 1927, however, that the possibility 'of cows' milk transmitting undulant fever to man was taken 'seriously, since when cases have been reported running almost 'into thousands, from such countries as America, Sweden, Italy, 'France, Germany Austria, Denmark, Holland, and, what concerns us most, from Great Britain." (Rabagliati.)

Cases of undulant fever have also been reported from the Irish Free State. The opinion has been expressed that the infection of dairy herds with contagious abortion must be more frequent than is suspected, for the germ of the disease has been frequently found in milk wherever sought.

Undulant fever, the disease of man, is serious, and though the mortality is usually low, the course is protracted. However, most of the cases which are due to the bovine organism have been described as comparatively mild, and it appears as if this organism has a low pathogenicity for man. Latterly, however, the numbers of cases which are being reported are mounting up very rapidly, and Cotton remarks: "It is far too early to predict the 'significance of *B. Abortus* to human health. We are confronted 'with a newly-found danger which we as yet poorly understand. 'We have reason to hope that it is not a serious one, but we do 'not know."

This is, perhaps, not the most suitable section of this report to enter into any lengthy consideration of this disease in these latitudes in man, but a few words will not be amiss. I have seen the opinion expressed that in all obscure continued fevers, infections simulating acute tuberculosis and typhoid fever yet not due

to the organisms of these diseases, undulant fever should be suspected. I note that the first case recorded from Australia was variously diagnosed as follows: enteric, influenza, gastric-influenza, ulcer of the stomach, septic throat, pleurisy. The next case in Australia was correctly diagnosed on the second attack of illness, having been diagnosed during the first attack as gastric-influenza, which is instructive.

It has been stated that the bovine type of undulant fever, when not recognised, is generally mistaken for typhoid in colder countries, and malaria in hot countries.

Sir Weldon Dalrymple-Champneys, who is a world recognised authority on this subject, reports a case in which the patient was ill with this disease, except for brief intervals, for 44 years.

Considering the reported incidence of contagious abortion amongst milch cows, blood agglutination tests for brucella should certainly be carried out on all obscure human pyrexias, which do not furnish reactions for the commoner continued fevers.

"The routine examination by the agglutination test, whenever possible, of samples of blood sent for diagnosis in cases of continued fever, or even those submitted for Wassermann reaction, have resulted in the discovery of twenty additional cases in which the agglutination titre was sufficiently high to render a diagnosis of undulant fever inevitable."

(Dalrymple-Champneys.)

It has been submitted that this infection may be conveyed from man to man, as well as by the agency of cows' milk, but this appears unlikely, except under exceptional circumstances. "The question of inter-human infection was a difficult one, but it had been said that such infection occurred in hospitals where nurses were infected by patients. Sir Percy Basset Smith, on the other hand, stated that no case had ever been reported amongst the medical or nursing staffs of the naval hospitals, where hundreds of cases of Malta fever had been treated."

(Dalrymple-Champneys.)

Bovine Mastitis. Streptococcal sore throats in human beings have often been attributed to organisms derived per the milk secretion from cases of bovine mastitis, or inflammation of the udder. Similarly, many outbreaks of scarlet fever have been traced to the milk supply, but whether the organism responsible for either septic sore throat or scarlet fever in man is derived from a pathogenic condition in a cow, or whether it is introduced during the process of preparation of milk for sale, is debatable. Epidemics which are undoubtedly due to carriers of various diseases handling the milk, prior to consumption, will be considered in a later section of this chapter. In the Lee outbreak of septic sore throat the streptococcus epidemicus was repeatedly isolated from the udder of an infected cow, and a similar organism identical in all cultural characteristics from the throats of patients and the blood of one patient.

It has been submitted that there may be a form of mastitis in cows which has the same causal organism as scarlet fever. On the other hand, it is argued that all milk streptococcal infections have been passed to the milk by a human carrier, and do not arise from a streptococcal mastitis in the cow. This latter view is not likely to be found to be completely correct. The causal organisms of human diseases may be implanted on animals, who later may infect human beings. In one milkborne epidemic of diphtheria, virulent diphtheria germs were recovered from the udder of a cow. The diphtheria germ is not naturally a parasite of cattle, but can apparently grow on existing lesions—in this case the lesion from which the germ was recovered was that of cow-pox.

Mastitis is not uncommon, and in any case when due to streptococcal infection, millions of streptococci mastitis are present in the milk. Milk from such a case, on standing, turns ropy or stringy and may be blood-stained. I have received such "ropy" milk on two separate occasions in Louth. Such milk is unfit for human consumption.

There are other organisms associated with mastitis—*B. pyogenes*, *Staphylococci*, etc. It is quite possible that these organisms, which have a pathogenicity for a particular species of animal, may assume pathogenicity for man under certain conditions.

Anthrax. The bacillus of this very serious disease is excreted in the milk of the affected cow, but transmission to man is luckily not likely to occur. In the course of the disease, the milk secretion ceases almost immediately and the infection in bovines is stated to be rapidly fatal. Following fatal cases of anthrax, however, there is an infection known as "anthrax fever," which may be a mild form of the disease, due to an attenuated bacillus.

Foot and Mouth Disease.—Human beings can get severe gastrointestinal trouble from milk of cows suffering from this disease.

(b) Disease due to Contamination of Milk. In these diseases the germ is introduced into the milk after it leaves the cow, by someone engaged in milking or in preparation of milk for the supply of the public. I believe I have already said that the road from the cow to the table is long and dangerous, and these diseases prove that. The diseases which may be conveyed in this way are—typhoid, the para typhoids, enteritis, cholera, dysentery, food poisoning, poliomyelitis, scarlet fever, septic sore throat and diphtheria. There may be, and very likely are, others, which have not yet been recorded.

Typhoid and the Para-Typhoids. Many epidemics of these diseases have been traced to carriers of the germs handling milk supplies. The excreta and urine of the carrier are the principal sources of the germs, and it is through the unhygienic habits of the milkers that the germ gains access to the milk. Domestic animals may possibly act as passive carriers and undoubtedly flies often infect the milk supply by linking the dairy with the midden-pit. Water used in washing dairy utensils, etc., may also furnish a link from a polluted well to the milk.

Several instances of the danger of carriers of enteric being engaged in the milk trade have occurred in Louth. Typhoid was in the past endemic to Dundalk. The eighteen year period from 1913 to 1930 inclusive, gave an average of 20 cases per year. In 1919, sixty-one cases were notified in the Dundalk Urban District. The incidence of the disease decreased to nearly vanishing point following the closure of certain dairies. In 1928 an epidemic of this disease was traced to a dairy in Ardee. This dairy was also closed, but some few sporadic cases continued to occur for a couple of years in that vicinity. These cases were found invariably to be due to a failure to completely and on all occasions obey the order. Final warning was given and no further cases occurred, which could be traced to this dairy.

Enteritis. Summer diarrhoea in children has been reported to be due to dirty milk, sometimes caused by fly pollution in the dairy. It is probably often caused by dung or other germ containing extraneous matter being in solution in the milk. Following efficient milk legislation a drop in the death rate due to this disease has been noted.

Scarlet Fever. (Scarlatina). In regard to this disease many epidemics have been recorded in which a carrier of haemolytic streptococci has been employed in connection with the public milk supply. Picking an instance from my notes, the first I come on may be summarised thus: Milker's child is sick with sore throat, infects her father who becomes a carrier of haemolytic streptococci and causes scarlet fever epidemic in Durham of 85 cases.

The following quotation from "Principles of Epidemiology" (Stallybrass), will best explain the many ways which contamination of milk with this germ may occur.

"In the 74 epidemics of milk-borne scarlet fever tabulated by Busey and Kober (1895) the manner of contamination was given as follows :—

"(a) In 41 instances the disease prevailed either at the milk farm or dairy. (b) In 6 instances persons connected with dairy had either lodged in or visited infected houses. (c) In 20 cases the infection was attributed to disease among the milch cows, in 4 of these the puerperal condition of the cow was blamed; in 9 instances disease of the udder or teats was found; in 6 instances there was loss of hair and desquamation of the skin of the animal. (d) In 10 instances persons working with the milk were suffering from, or convalescent after, scarlet fever; in at least 8 cases they also acted as nurses. (e) In one case wiping the cans with a possibly infected cloth was blamed. (f) In 2 instances there was mixed infection of scarlet fever and diphtheria."

In this disease, as in the next which I shall consider, i.e., diphtheria, the carrier state exists in the upper respiratory passages and secretions from the mouth, nose or throat as well as the expired air can furnish the mode of conveyance of the germ from the carrier to the milk.

Diphtheria. Many outbreaks of this disease have been traced to milk supplies. Carriers of the organism of the disease handling the milk supply, or actual cases of the disease at the farm are the usual causes of Klebs-Löffler bacillus being in milk. It has already been said that cows suffering from papules, crusts and ulcers on their teats may harbour virulent diphtheria germs. It is stated that small domestic animals such as dogs and cats, though themselves immune to diphtheria germs may act as passive carriers, by transporting the causal organism from human cases to milk receptacles, etc., in the dairy.

Bacillary Dysentery. In the milk-borne epidemic in Aberdeen in 1919 there were 978 cases and 72 deaths. The source of infection was probably a sister of the farmer, who had been nursing dysentery cases during the Great War in Salonica.

Paradysentery. In 1926 in St. Andrews there was an epidemic affecting 150 people. The original outbreak—there were two waves in this epidemic—was due to a girl milker who continued milking while suffering from diarrhoea.

I have merely extracted these two instances from my notes as examples—other examples might be given.

Food Poisoning. A milk-borne epidemic in Ireland reported by O'Kelly in 1922, was due to *B. Enteritidis* and ran into 150 cases out of a possible maximum of 170. An outbreak carried by milk, due to *B. Aertrycke*, in Glasgow in 1914, ran into 370 cases.

Poliomyelitis. In 1914 in Liverpool four paralytic cases occurred; three had the same milk supply. In Broadstairs in 1926, an epidemic of 68 cases occurred in which there was no association other than milk. In both of two American outbreaks a case of the disease was found on the farm supplying the milk.

Septic Sore Throat. Numerous epidemics of this disease due to milk supplies have been recorded. As early as 1881 a milk-borne epidemic of this infection was reported. It ran into 300 cases with 3 deaths, and affected 90 families out of a possible 110 who consumed the same milk.

It would be quite possible, indeed easy, to fill the space required for a couple of average sized Annual Sanitary Reports with details of one sort and another concerning milk-borne epidemics, and the instances I have given are the result of only casual reference to the literature on this subject.

I shall conclude this consideration with the following quotations :—

"Through 1928, 87 milk-borne outbreaks of scarlet fever and 45 of septic sore throat have been recorded in the United States. No doubt other outbreaks have occurred.

"The 87 outbreaks of scarlet fever caused 8,368 cases with 39 deaths (data incomplete). The 45 outbreaks of septic sore

throat caused 22,413 cases with 187 deaths (data incomplete).”—(Scamman.)

“In the States there have been 258 milk epidemics in the past six years, comprising 177 of typhoid fever, 34 of scarlet fever, 22 of septic sore throat, 8 each of undulant fever and diphtheria. The only epidemic disease for which the cow is primarily responsible is undulant fever, though in some septic throat epidemics the cow is open to suspicion. Human carriers and ambulant cases amongst the dairy workers account for the great majority of cases, so much so that in America the first step in investigating a milk epidemic is to find the carrier.”—(“The Medical Officer.”)

Before leaving the subject of pathogenic organisms which may be introduced into milk after it leaves the cow it is as well to emphasise that apart from bovine bacilli, human tubercle bacilli may be introduced by milkmen who are suffering from tuberculosis.

Mr. J. T. Clinton, the Veterinary Inspector for Dundalk Urban and Rural Districts, states in his report for the year 1929: “I have before now called attention to the prevalence of ‘wet milking,’ a filthy habit which is difficult to get rid of.” This practice of spitting on the fingers to save the strain on the teat before starting milking is certainly very filthy and I trust it is not now prevalent in Louth. This is a method by which a person suffering from tuberculosis may easily introduce human tubercle germs to the milk.

Another route by which human tubercle bacilli may gain entry to the milk is unsterilised bottle supplies. If bottles are not efficiently sterilised at the dairy after collection from houses, any infectious condition existing on the milk delivery round may be disseminated. It is quite true to say that a carelessly organised bottle delivery is more dangerous to the public health than the ordinary old-fashioned delivery. I would emphasise however that when properly organised, bottle delivery is a welcome advance in milk hygiene. Bottling of milk and designations of milk like “Pure Bottled Milk,” “Tubercle Free Milk,” “Guaranteed Pure Milk,” etc., may be misleading, and sterilisation of bottles, etc., and all designations call for supervision. What is known as “Wrapped Milk,” presents many advantages, one of which is that the carton in which the milk is delivered is useless as soon as the contents have been consumed. A fresh clean container is issued at every delivery, and the old containers are easily destroyed.

Up to now, we have dealt with diseases from which cattle as well as man suffer, and diseases from which man only suffers, but which are frequently conveyed by milk. There is a vast amount of other contamination of milk taking place in careless dairies, which though comparatively harmless is, from every point of view undesirable. These germs, that are much too numerous to enumerate, arise from dust, dung, bedding, etc., and make for a high bacterial count. A high bacterial count means a dirty milk and a milk which goes sour comparatively quickly. These

germs are uneconomic to the dairyman. They to a great extent furnish the index for the cleanliness of the preparation of the milk. The more non-pathogenic, or harmless, germs present in the milk obviously the more carelessness exists at the farm. The less the number of these harmless germs present in a milk, the greater the hygiene in the farm.

It is carelessness, lack of hygiene in the farm, in the preparation and delivery of milk, which is responsible for the presence of pathogenic (disease carrying) germs in the milk.

The non-pathogenic harmless germs vastly outnumber the pathogenic disease causing germs. When there is a small count of harmless germs there is less likelihood to be any harmful germs.

Therefore the non-pathogenic germs can be taken as an index of the hygienic standard of a milk.

CLEAN MILK.

In countries where severe legislation in regard to milk is enforced, infections with bovine tuberculosis have practically ceased. Indeed it is stated that so rare has bovine tuberculosis become in some of these lands, that continentals regard the condition as an English disease. Tuberculosis is not the whole matter however as anyone who has read the foregoing will know. There is undulant fever which may result from contagious abortion in the dairy herds. There is also the long train of serious infectious diseases which may result from contamination at any point of the road from the cow to the consumer.

Efficient veterinary inspection will then be an essential to eliminate the danger of tuberculosis and the strictest regard to an adequate code will be necessary to ensure cleanliness at the farm and cleanliness of all the processes which the milk passes through before it reaches the table. Both of these requirements are provided for in the Milk and Dairies Act, 1935, and an adequate code is provided in the Milk and Dairies Regulations, 1936. This Act and the Regulations—with certain reservations—come into operation on the 1st January, 1937.

Most people I think realise that previous legislation which health officials have had placed at their disposal to endeavour to ensure the safety of the public milk supply has been very inadequate.

Three things were necessary before clean milk could be generally available—the Government had to desire it, the public had to desire it and the producer had to desire it. The fact that the Milk and Dairies Act, 1935, is now here would appear to indicate that all three factors are present.

Generally speaking in the course of inspections I have found dairy owners very keen on ensuring that the milk supply is pure and wholesome. Such an attitude is only natural. When traders deal in such an important yet potentially dangerous a

food as milk, the traders will welcome all precautions which will improve the quality of the commodity they sell.

Very occasionally I have met people who regard any interest in the production of milk as officiousness and who are inclined to resent any enforcement of the legislation. These people appear to regard it as perfectly reasonable that the tobacco and spirit trade should be subject to inspection, but milk they argue must be regarded as the most harmless and nourishing of foods and be above suspicion. Any other view is ultra-modern heresy; any talk of milk ever being dangerous is merely the twaddle of alleged scientists. This attitude has been engendered by the very innocent appearance of milk and without the aid of the scientist it is frequently difficult to detect bad milk. Perhaps this view is sometimes helped by the survival of unhygienic medievalism, and the arguments are certainly backed up by medieval slogans, proverbs and "wise-cracks." A pig-keeper once remarked to me, "Where there's muck, there's luck." and there must have been a lot of luck about. "Clean dirt is no harm" is frequently heard, but one is thankful to remember that the majority of old sayings extol the virtue of cleanliness, and to quote "We've all got to eat a peck of dirt in our day, but we don't want to eat it all at once." I have said that it often requires the aid of the scientist to detect bad milk; the housewife would not dream of accepting fish, meat, fruit, etc., etc, which was bad. In the case of such articles of diet the housewife can usually tell with her own eyes, when they are of poor quality. Consequently the greatest care is devoted to these foods, expensive processes ensure that the consumer receives fruit, meat and fish from far distant countries in a fresh, wholesome condition. But in the case of milk from the immediate neighbourhood, the consumer often receives it without any efficient steps to ensure its purity having been taken.

If there are any people who still persist in regarding the super vision of milk supplies as unnecessary, I am tempted to request an answer to the following questions.

1. Is the buyer to have a clean safe milk supply by right?
2. Is the buyer to have clean milk as a privilege?
3. Does the buyer wish to purchase clean, or dirty milk?
4. Which is normal, a healthy or an unhealthy cow?
5. Is the milk secretion which leaves an unhealthy cow clean and normal?
6. Is it intended that the healthy milk from healthy cows should be sullied foully on the journey to the consumer?

In the initial year it is unlikely that full efficiency in regard to the enforcement of the Milk and Dairies Regulations, 1936, will be apparent. The Act and Regulations are static, the work and extension of operations carried out under them must and will be, dynamic. The health of the cow, the diet, the housing

and management of the cow, the production, storage and distribution of milk all require attention to safeguard the milk supplies. Some people have summarised all that is necessary for clean milk in one word, "method." This is no doubt true, granting in the first place healthy cows. So, we must arrange expert examination of the health of the dairy cows and of the method of producing milk for the market. This indicates the following division for supervision of the milk supply: (a) Veterinary inspection; (b) Sampling; (c) General inspection of milk preparation. Let us consider these matters in this order.

(a) **Veterinary Inspection.** Regular inspection at six-monthly intervals will go a long way towards improving the health of the dairy herds. Examples of how such work has improved milk supplies elsewhere are abundant. I take the following facts from an excellent paper read before the Newcastle-on-Tyne Sessional Meeting of the Royal Sanitary Institute by Mr. D. Boyd, Sanitary Inspector, Berwick-upon-Tweed. Up to 1923 the inspection of dairy cattle was carried out by the sanitary inspector. In the opening remarks of this paper Mr. Boyd states, "My predecessor and myself generally managed to have from three to 'four cows per annum removed from the dairy herds, by the 'simple process of giving the farmer a timely hint. No doubt 'we got rid of as many cows then as we can get rid of now, but 'there is this difference, we get rid of them now at an earlier stage 'of the disease, and, moreover, there are not so many dangerous 'cows to get rid of. Any 'old wife' could almost tell what was 'the matter with those I discovered, but now those we eliminate 'are not always discoverable, even by a careful veterinary surgeon, 'without the aid of an additional officer—the bacteriologist."

A veterinary inspector was appointed in 1923. and the first inspection during that year gave 12 per cent. 'suspects.' Two of these 'suspects' were immediately slaughtered, three removed from the area, six made dry and fattened, and seventeen not regarded as dangerous were allowed to milk until they were also fattened for slaughter.

In his first report the Veterinary Inspector stated, "If more 'exacting tests were made upon the cows a much greater proportion would be found affected with tuberculosis." A tour of inspection is held every six months and the percentages of 'suspects' detected in the 11 half-yearly tours completed at the time of writing this paper are as follows, 12%, 5½%, 3.86%, 4.9%, 5.15%, 4%, 1%, 1%, 1%, 1%, 1%, which shows a satisfactory progressive diminution.

Mr. Boyd continues, "A point worth noting as indicating the 'indirect effect of regular veterinary examination may be observed 'in the number of cows noted as being fattened for slaughter 'during our rounds of inspection. Whereas in June, 1924, the 'second inspection, 26 cows were being fattened, the following half 'year there were 89 cows being fattened. It has since dropped 'to normal. This is silent but effective testimony to the educational value of the two previous inspections, and it is what may 'be regarded as reasonable co-operation by the farmer."

(b) **Sampling.** Systematic bacteriological examination of milk is absolutely essential to ensure a pure milk supply.

In 1925 a campaign to raise the standard of milk supplies was undertaken in Leicestershire, and up to 1935 seven thousand, seven hundred and two samples had been taken and submitted for bacteriological examination. The standards adopted were as follows:

"Good—A bacterial count of less than 500,000 organisms per cc., and the absence of *B. Coli* from 1-100th cc.

"Fair—A bacterial count of between 500,000 and 1,000,000 organisms per cc., or the presence of *B. Coli* in 1-100th cc.

"Moderate.—A bacterial count of between 500,000 and 1,000,000 organisms per cc., and the presence of *B. Coli* in 1-100th cc.

"Bad—A bacterial count of over 1,000,000 organisms per cc., or the presence of *B. Coli* in 1-1000th cc. or both." (Graham.)

No legal powers then existed to take samples and the samples were taken by the Sub-Sanitary Officers, yet during this ten years period not more than five refusals to permit sampling occurred.

In 1935 there were 54.3% samples which fell in the "Good" category, 19% "Fair," 2.4% "Moderate" and 24.3% "Bad," and 45% within grade "A." limits.

Through the intervening years an improvement is noted and an increasing number of samples are taken. In 1934 the figures are 67%, 'Good,' 19.1% 'Fair,' 1.2% 'Moderate,' 12.7% 'Bad,' and in all 62.6% within grade "A" limits.

When reporting on this scheme in 1930, when it had been only five years in operation, Dr. J. A. Fairer, states in an article in "The Medical Officer": "That the local district councils are 'keenly interested in the county council scheme of bacteriological examination is shown by the following extract from an urban district council report: 'The council viewed with concern the report received as to the standard of cleanliness in certain cases (principally with regard to milk produced outside the urban area) and the retailers and producers concerned have been accordingly communicated with and their co-operation sought in order that the higher standard may be attained in the future. It is interesting to note that out of 64 samples taken 24 were within grade A standard, and 16 were reported as 'bad.' With regard to these latter, two of the producers responsible have ceased to supply locally, in four cases structural and other improvements are in progress, and in the remaining cases, subsequent samples showed a marked improvement.'"

"The part played by "clean milk competitions" in the task of improving the countrys milk supply is to be commended; for "certainly the advertisement, education, and friendly rivalry which are associated with these competitions constitute some of the "best means of obtaining better milk and, in consequence, increased milk consumption."

In many places clean milk competitions have been arranged by the local authority, and the dairy owners have taken the keenest interest. The results of sampling have been circulated, and in every instance in which I have noticed published results, a great and real improvement in the milk supply took place. In one instance I note that practically every milk producing farmer has installed steam sterilisation, whereas at the start of the competition only one had a plant installed. In one town in Yorkshire the council award a silver cup annually to the winner, while medals, subscribed for by the public, are awarded to all dairy-owners whose standards of production, as evidenced by sampling and inspection, come up to a certain standard.

Some confusion of thought has arisen over the sampling of milk, which is required to ensure a pure milk supply. Sampling of milk under the Food and Drugs Acts is for chemical analysis, i.e., to detect adulteration, i.e., deficiencies of fats, etc., in the milk. This is mainly to detect fraud and is, of course, necessary. A milk which is below standard in food values leads to starvation and undernourishment in the consumer, and such fraud mainly hits the young.

On the other hand, sampling to ensure a pure milk supply is bacteriological and is to detect carelessness leading to unhygienic dangerous milk.

Bacteriological examination of milk follows the same lines as the diseases caused by milk and may be divided into:

- (1) Examination to detect germs arising from a diseased cow.
- (2) Examination to detect germs added to the milk after it leaves the cow.

The latter (2), may be divided again into:

- (a) Examination to detect germs causing diseases in man.
- (b) Examination to detect germs causing souring or other effects as to make the milk useless to the consumer, and uneconomic to the producer.

(3) Inspection of method of producing and preparing milk.
The inspections under this heading are essential. Certain provisions are necessary to secure a moderately clean cowshed. It is in the cowsheds that our inspections must start. With regard to hygiene a cow is not constructed on quite the same lines as a battleship, and if we are to have clean milk we must take cognisance of this fact. We must make sure that dung will not through the fault of a badly constructed cowshed, or poor "methods" be in solution in the milk.

The coarser contamination can be removed, of course, by straining, and milk being a white opaque fluid will look little the worse. The bacterial count will be high, however, and offensive soluble matter will be present still.

It would be an excellent thing if inspection of cow-byres were carried out occasionally by the house-wives.

I have seen many excellent cow-byres in which the cattle were well groomed and clean. I have seen a minority which could only be described as of a poor standard. I have seen some few which were bad in every way.

Perhaps it would be as well if I give here a description of what I remember of one of the worst dairy sheds I have seen inspected—not necessarily in Louth.

The udders, tails and flanks of the cows are heavily encrusted with a mixture of dung and mud. Fresh dung in some cows shows up in patches against older and dried encrustation. The plumes of the tails are not visible as such, they are merely matted hair and mud. The bedding is filthy, the atmosphere close smelling, hot and dusty. A ray of sunshine strikes through an inadequate window into the semi-gloom, and shows up the thickly dancing dust particles. By closer examination one sees cobwebs festooning the roof and corners, heavy with dust. The walls are not limewashed, but manure washed. The milkers' clothes and hands are dirty—it would be impossible for him to keep clean in such surroundings for any length of time. His boots are green with fresh dung, his trousers and one sleeve of his coat are dung smeared. He spits on his hands and draws the milk into a pail which is dirty on the outside, and contains a scum of dirt, I think, on the inside.

If the milk of such a dairy were examined after milking, but before straining, visible cowdung and hairs would quite probably be present.

This picture is not over-drawn. With any carelessness a badly constructed cow-byre can quickly become in a like condition.

A properly constructed cowshed is essential for the production of clean milk, and raised standings are to be insisted on. Raised standings help to prevent the cow soiling herself with dung. An impervious floor, properly drained and an airy well lit shed are also necessary. It has been demonstrated that clean milk can be produced in out-of-date and poor type cowsheds, provided the essential requirements in regard to floor, etc., are present and that the all important cleanly general methods are adopted.

The production of clean milk is not beyond the powers of any dairyowner if the will to improve existing conditions and methods is present. It stands to reason of course that clean milk can be turned out with greater ease from an ideal and up-to-date cow-byre.

In reference to queries I have occasionally had from dairy-owners proposing to build new cow-byres, the Department of Agriculture have published a leaflet entitled "The Construction of a Cowhouse." The under-quoted is an excerpt from a pamphlet

issued by the Milk Supply Sub-Committee of the West Riding Co. Council, Yorkshire, which is pertinent to the subject of conversion of old cow-byres into healthy cowsheds. Dr. T. N. V. Potts, C.M.O., West Riding, has kindly given my office permission to re-publish.

"B. Existing Premises.—There are, no doubt, some existing "buildings used as cowsheds which were not originally constructed "for that purpose, and which cannot, except by re-adaptation, be "made to satisfy even the most elementary hygienic requirements. On the other hand, there are many existing cowsheds which although not fulfilling all the conditions set forth, may yet be rendered workable by providing them with abundance of light, efficient ventilation, suitable impervious flooring, drainage and an adequate supply of water.

"If the producer studies a modern cowshed and its requirements and equipment as a pattern, then he can compare deficiencies, if any, in old buildings.

"A sanitary cowshed undoubtedly promotes the health of the "herd, the cleanliness of production, and therefore safety and "greater keeping properties of the milk.

"Suggested figures for reference:

"(1) Lighting.

"Chiefly in the roof, lighting up the hindquarters of the "cows; amount equal to 1-20th floor space.

"(2)—Ventilation.

"Air inlets 50 to 80 square inches for each double stall.

"(3) Drainage.

"Manure channel, the main cause of fouling of cows, should "be 6 in. to 9 in. deep at the heel of the stall, and be of impervious "materials."

The review, in which I noted this pamphlet mentioned, occurred in a medical periodical dated the 17th February, 1927, and although the above extract reads very simply it contains much that is important. It illustrates the necessity for conversion of old cowsheds into cowsheds which comply with modern requirements and the practicability of such conversion. The standards suggested are practically the same as those which are required or desirable in this country. I shall enter into a brief consideration of the Milk and Dairies Regulations, 1936 in a later section of this chapter. However the only essential laid down in the Regulations referred to, which is suggested in the above extract, is the channel of impervious material. This channel must be, in Saorstát Éireann, 6 in. deep by 18 in. wide. For the rest, in regard to what is contained in the above quotation, no definite standards are determined, and the figures given furnish a useful guide.

Now dairy-owners are sometimes, without any real cause, very despondent concerning the possibility of converting their old cowsheds. I would therefore suggest that they adopt the admirable advice contained above, and study their existing cowsheds, having first studied the Milk and Dairies Regulations, 1936, Part II., and the Department of Agriculture leaflet No. 53, "The Construction of a Cowhouse." Then I think that probably many comparatively inexpensive ways of improving their premises will occur to them. Some of the existing cowsheds are I fear so obsolete that it will be difficult to produce clean milk except the greatest care as to method is observed. With regard to this, my opinion is that, for the sake of the health of the people, the sooner they are demolished, and new ones built, the better. This is also advisable from the point of view of dairyowners and the health of the cattle stock of this country in general. It has been shown before now that the incidence of disease is highest amongst animals that are badly housed and hardest worked. The campaigns to demolish slums will undoubtedly go far to eliminating human tubercular infection amongst men and raising the general standard of health. A campaign to abolish slum cowsheds will go equally far to abolish bovine tubercular infection among cattle and man. The same rules re overcrowding, vitiated air, inhalation of dried sputum in dust particles, etc., apply to both man and cattle.

A definite programme to remodel all cow-byres and to build new ones where necessary is no trivial matter, no matter to be considered lightly, as I have been told. It certainly is not. It is not a matter of cash so much, as a matter of flesh and blood, the health of the race, and particularly the health of the children of the race. It offers no imaginary promises and it must be taken seriously. It will be a permanent improvement and if it is done next year, it will not have to be done the year after. The effects of the Milk and Dairies Act, 1935, will be realised in years to come, and future generations will know by reading our general statistics if it was honestly operated. And that for the moment will suffice for cow-sheds.

It is stated by all authorities that one of the greatest sources of contamination of milk is dirty flanks, udder and tail. The hair must be kept short and the cattle must be groomed and the udder must be washed before milking, if the milk is to be clean.

The cow is not so clean an animal as the horse, but as she is a source of food supply that is surely all the more reason why she should be regularly groomed. It is a peculiar situation. Cows require grooming, yet the idea of grooming a cow is regarded in some quarters as funny and grotesque, indeed verging on the eccentric or unnatural. This attitude is not uncommon and judging by what I have heard and read, appears to have been common in many other lands when clean milk legislation was being initiated. On sundry occasions I have read the fact recorded and a question as to why this should be so, also recorded. The horse spends a good deal of life in view of the public, cows except when they are out on pasture, are shut away. I have noticed that in countries where cattle are used in draught that they are as well groomed as the horses

and are decorated with buckles and rosettes and all the other trappings that may tend to make the neighbours envious.

One of the commonest causes of a high bacterial (*B. Coli*) count in milk is failure to discard the fore-milk. Even in as hygienic as possible cowsheds, the cow's udder will probably come in contact with bedding which is not absolutely clean during the day. The capillary attraction of the teat canal of the teat causes the first flow in every milking to show a higher bacterial count than any other. I note the following extract from a report of an investigation which took place in Queensland. "One point which is very often overlooked in producing clean milk is that the first few jets from the teat contain an excessive number of bacteria, and should therefore be rejected. To convince farmers that this was so, single jet samples were taken at four dairy farms, and the bacterial content of each determined. The results were highly instructive. The first jet in all cases gave a very high count, but after three jets had been drawn off, the count settled down to a figure of less than 3,000 per cc., although the first jet samples gave figures ranging from 10 to 40 times that number." The necessity for clean straining also arises and I cannot do better than to continue to quote from the same report.

"The effect of straining through absorbent wads was also investigated, when it was found that after three strainings through the same wad, the count was nearly double that when only one straining took place. It would appear, therefore, that bacteria are washed through a used wad, and as it is not usually the custom to insert a fresh wad for each successive batch of milk, the importance of this point in clean milk production requires to be emphasised."

The use of covered milk pails is essential to the production of clean milk. After what has been said in preceding parts of this report concerning milk as a breeding ground for germs, and bacterial content of milk, the necessity for covered pails should need no explanation. It might be well however to repeat that milk with a high bacterial count is uneconomic and keeps badly. For the same reasons, dry bedding or other dusty matter must not be moved in a milking shed for a full half hour before milking time, and the hands of the milkers must be washed thoroughly. clean before milking is started and clean overalls put on.

Milking stools must be clean, and needless to say, the milking pail should be sterile, i.e., so clean that no germs are present, at least on the inside. This is not so hard to ensure, it merely requires boiling water. As soon as is possible after milking the milk from each cow should be removed from the milking shed.

Now I have indicated what I consider the chief matters which should be looked to, during the inspection of a cowhouse, and have roughly given the reasons why I consider these matters to be of paramount importance.

I have not dealt with the inspection of the distribution of milk, and in this matter two things are really essential. These two things are (a) cleanliness of all containers and milk men; (b)

exclusion of carriers of any disease from having any dealings with milk preparation or delivery.

If the directions which have now been given were carried out, we should have a reasonably clean milk supply.

It is probable that sampling of milk supplies arriving in the cities and towns from our rural areas will have a very good effect. If they adopt some such scheme, and I hope they do, as that in force in Plymouth, the effect on our wholesale milk supply will be good. This, by force of example, will make our local supply better.

In Plymouth the following procedure is carried out :—

"Samples are taken week by week and are submitted to the City Bacteriologist for report. A copy of his report is signed by the Medical Officer of Health and sent to each retailer from whom the samples were taken. The retailer is told whether his milk is clean or dirty, and if it is dirty he is asked to take the matter up with his farmer in the country from whom he purchases the bulk of his supplies. In addition, the retailer is asked to explain to the Medical Officer of Health why he is selling dirty milk and why his name should not be removed from the register. This has an excellent effect. Frequently the retailer changes his milk supply and purchases future supplies from more cleanly farmers. Indeed, the milk retailers in this City are very keen on selling clean milk, and have often asked us to take samples of their supplies, and especially when they are changing their wholesaler and buying milk from a new source. Several farmers in outlying districts in Cornwall and Devon have had, in consequence of pressure from Plymouth retailers, to reform their methods of milking or else to give up keeping cows, for at the present time there is no ready market for dirty milk in the City. It is interesting to see how during the last six years the growth of milk sampling has increased. In the year 1924 only 11 samples of milk were taken. From March, 1925, to the end of that year 339 samples of milk were taken for bacteriological analysis. In 1926, 833 samples were taken for this purpose; in 1927, 891 samples of milk and 36 samples of ice-cream were taken, and in the year 1929, 1,206 samples of milk were taken and submitted to the bacteriologist, and in addition there were taken 62 samples of cream and ice-cream. Out of all the samples taken since 1925 till the present time, only two have been found to contain the tubercle bacillus. In both these cases the samples were followed up to the farm where cows were found with tuberculosis of the udder. These animals were, of course, destroyed."

Alderman H. M. MEDLAND,
Chairman, Public Health Committee, Plymouth.

Milk and Dairies Act, 1935.

This Act is designed to improve the milk supply and to ensure a reasonably pure and wholesome milk supply for the people.

Part I, 3 (1) defines milk as any article of food which is whole milk, skimmed or separated milk, cream or buttermilk, for all parts of the Act, except Part IV.

Part I, inter alia, states: "II (1) It shall be the duty of the "sanitary authority to enforce the provisions of this Act and of "every Order and Regulation made thereunder and to exercise "the powers vested in them by this Act or such Order or Regulation."

"(2) If a sanitary authority fail to perform any of their "duties under this Act, the Minister may make such Order as he "thinks necessary or proper for the purpose of compelling such "authority to perform their duties, and any such Order may, without prejudice to the exercise of the powers conferred on the "Minister by Section 72 of the Local Government Act, 1925 (No. "5 of 1925), be enforced at the suit of the Minister by mandamus."

Part II. details the registration of dairymen and dairies, makes registration compulsory, and requires the sanitary authority to keep a register of dairymen who have been duly approved.

Part III deals with regulations, and section 31 (1) gives the Minister power to make regulations in regard to the following matters, amongst others:—

- (1) Construction, lighting, ventilation, drainage and water supply of dairies.
- (2) Hygiene of dairies and all paraphernalia connected with dairies.
- (3) Milk hygiene.
- (4) Labelling, marking and closing milk receptacles.
- (5) Inspection of dairies, etc.

Section 31 (4) of this part of the Act reads as follows:—
 "If any person acts in contravention of or fails to comply with "any regulation made under this section such person shall be "guilty of an offence under this section and shall be liable on "summary conviction thereof, in the case of a first offence under "this section, to a fine not exceeding Five Pounds; and, in the case

"of a second or any subsequent offence under this section, to a fine not exceeding Fifty Pounds; and, in either case, if the offence is a continuing one, to a further fine not exceeding Forty shillings for each day during which the offence continues."

Part IV. of the Act deals with the sale of Milk under special designations, and gives the Minister of Local Government and Public Health power to make regulations in relation to such matters. In this part of the Act, milk is defined as whole milk.

Part V. deals with the prevention of disease, which may be caused by "carriers" of disease, or cases of disease, handling or being connected with the milk supplies. The following diseases are specifically cited:—

Tuberculosis.
Typhoid Fever.
Paratyphoid Fever.
Diphtheria.
Membraneous Croup.
Scarlatina.

This Part of the Act gives power to the District Medical Officer to stop the sale of milk supplies which may cause such diseases.

The Minister may declare any disease which is likely to be caused by infected or contaminated milk to be a disease to which this Part of the Act applies.

Part VI. deals with the prevention of diseases which may be conveyed to man by a diseased cow. The following diseases of animals are specifically cited and the sale of milk from cows suffering from these conditions is forbidden.

- (1) Tuberculosis of the udder.
- (2) Any tuberculous condition of the uterus.
- (3) Any form of tuberculosis in which tubercle bacilli are secreted.
- (4) Any septic condition of the uterus.
- (5) Acute mastitis.
- (6) Chronic mastitis.
- (7) Actinomycosis of the udder.
- (8) Anthrax.
- (9) Foot and mouth disease.
- (10) Suppuration of the udder.
- (11) Retained placenta.

The Minister may by Order declare any disease affecting animals to be a disease to which this part of the Act applies.

Section 48 (1) of this part of the Act reads: "If any person "sells the milk of any animal which is suffering from any disease "to which this Part of this Act applies, and it is proved that such "person had previously received notice from an officer of the "sanitary authority, or that he otherwise knew, or by the exercise "of ordinary care could have ascertained, that such animal was "suffering from such disease, such person shall be guilty of an of- "fence under this section and shall be liable on summary convic- "tion thereof, in the case of a first offence under this section to "a fine not exceeding Fifty Pounds, and in the case of a second or "any subsequent offence under this section, to a fine not exceed- "ing One Hundred Pounds, or to imprisonment for any term not "exceeding six months, or to both such fine and imprisonment "and, in either case, if the offence is a continuing one, to a fur- "ther fine not exceeding Five Pounds for each day during which "the offence continues."

Part VII. deals with the bacteriological examination of milk, which we have seen furnishes the surest index of the cleanliness of method of preparation.

Part VIII. gives certain officers power to take samples of milk.

Part IX. deals with miscellaneous provisions.



The Milk and Dairies Regulations, 1936

These regulations are made by the Minister for Local Government and Public Health under Part III. of the Act.

Part I. (8) states:

"(1) A dairyman shall cause all reasonable precautions to be taken in any dairy under his control against the exposure of any milk in such dairy under his control against the exposure of any milk in such dairy to infection or contamination.

"(2) A dairyman shall not permit any person in his employment to commit any offence whether by act or omission against these regulations and shall take all reasonable steps to prevent the commission of such an offence by such a person.

"(3) A dairyman shall take reasonable steps to make the provisions of these regulations known to every person in his employment so far as such provisions impose any duties or restrictions on such person and so far as they relate to the premises in which such person is employed.

"(4) A dairyman shall provide in any dairy under his control such utensils, machinery, apparatus, clothing and other supplies as will enable the provisions of these regulations to be complied with easily and conveniently.

"(5) A dairyman shall provide in such parts of any dairy under his control as may be necessary such clean towels, brushes and other washing apparatus and such soap and other washing materials, as will enable the provisions of these regulations in regard to cleanliness to be complied with easily and conveniently.

"(6) A dairyman shall keep every dairy under his control and the utensils, machinery and apparatus in such dairy in good order and repair.

"(7) Where any milk is kept, treated or delivered by a dairyman reasonable precautions shall be taken by such dairyman to prevent such milk from reaching a temperature higher than sixty degrees Fahrenheit except when such milk is being pasteurised."

Part II. is really very important. It deals with the necessity for an impervious durable non-absorbent properly drained floor. In all cowhouses raised standings are required and dung channels, and behind these a covered passage sufficiently roomy

to permit the attendants passing to and from without danger of soiling clothes. If a special milking shed is provided certain exceptions are made in regard to such shed, but the requirements must be in evidence in all other cowsheds. Lighting and ventilation are considered; there must be sufficient light to enable the milker to detect dirt on udder or teats and note abnormality of milk. Ceilings must be made of material easily cleaned. Potable water must be available. It is obvious that water must be clean, as it would be the height of folly to bring any water of a doubtful nature in contact with such an ideal breeding ground for germs, as milk.

Vessels must be kept clean, cowsheds must be kept clean and floors must be flushed with water at least once a day. No hay or other dust producing material is to be kept in a cowshed except in closed bins, or other suitable receptacle. En passant, a loft with open or badly fitting trap door is not a suitable receptacle, much less a shelf loft.

Dung and all offensive matter must be removed daily and disposed in such a manner as to prevent any contamination of milk by flies, dirt or dust, or any offensive odours reaching any building of the dairy. Clean bedding material must be supplied. Dung pits must be at least 30 feet from any part of the dairy, and details re construction in the interest of public health are laid down.

Rules concerning cleanliness of milk stores, shops, and all appliances used in connection with the milk supply are also framed; offensive substances in milk stores and shops are prohibited.

All persons handling the milk supply shall take precautions re cleanliness. Milkers shall wash and dry hands before milking and during milking wear an apron or overall. Aprons, etc., when not in use must be kept in a clean place

Milking shall be carried out in a good light, and milking must not be started for a full half hour if any dust-raising work has been carried out in the milking shed. Hair on quarters, flanks and portion of belly adjacent to udder and tail must be kept short. Hair on udder and teats shall be closely clipped. Prior to milking the cows, udder, tail and flank will be cleaned, then washed with clean drinking water, and then the udder and teats shall be again cleansed with a clean cloth damped with clean drinking water. The first flush of milk from every teat shall be discarded. No milk from a cow shall be sold within seven days of the cow calving. Of course milk from diseased animals is prohibited. Pigs, dogs and hens in cow-byres, milk stores and milkshops are forbidden. Pails with overhanging cowl or other device to prevent contamination of milk shall be used in milking.

Milk from each cow shall be immediately removed from the shed after milking, strained through sterile material and placed in covered receptacle. Milk must on no account be stored in unsuitable places which are detailed,

Between the 30th of April and the 1st November—with certain reservations—milk shall be as immediately as is reasonably possible, cooled to a temperature of 60 degrees, F.

Conveyance and distribution of milk are dealt with and the cleanliness and construction of milk receptacles detailed.

The following important ordinances are printed verbatim :—

“39. (1) Every person who is engaged in the conveyance or distribution of milk shall take all precautions which are reasonably possible to prevent such milk from being exposed to heat or diluted with water or contaminated by dirt, dust, flies, infection or otherwise.

“(2) No person shall deliver to a common carrier for conveyance any whole milk unless such whole milk is in one or more receptacles each of which complies with the following provisions. That is to say :—

“(a) It shall be clearly marked with the name and address of the dairyman by whom it was filled and with the day of the week on which the milk therein was produced.

“(b) It shall be securely closed and either sealed or locked.

“(3) No person shall convey or cause to be conveyed by railway or road any milk unless such milk is contained in a receptacle closed with a lid which is so constructed and fitted as to exclude dust, dirt, flies and rainwater and to prevent the return to the interior of the receptacle of any milk from such interior which has been splashed above the lid.

“(4) No person shall put any milk into a receptacle which has been conveyed by railway or road until after such conveyance, such receptacle has been washed and dried in accordance with the provisions of the Schedule to these regulations.

“40. No person shall use any vehicle for the conveyance of milk by rail or road unless the following regulations are complied with, that is to say:

“(a) The interior of such vehicle shall be clean.

“(b) No live animal and no article likely to contaminate the milk shall be carried on the vehicle at the same time as the milk.

“(c) If the vehicle has been used for the conveyance of offensive matter it shall not be used for the conveyance of milk until it has been cleansed and purified.

“41. (1) Every sale container shall be composed of non-absorbent material and shall be clean before being filled with milk,

"(2) Every sale container the capacity of which does not exceed one quart shall be constructed so as to be capable of being easily and securely closed by a sterile lid, disc or other device so that—

"(a) No portion of the sale container, lid, disc or other device which come into contact with milk in or being put into the sale container need be touched by any person while the sale container is being closed, and

"(b) The sale container when closed can be opened easily and conveniently without danger of the milk therein being contaminated.

"(3) Immediately before a sale container, the capacity of which does not exceed one quart, is filled, reasonable precautions shall be taken to ensure that such sale container is sterile.

"(4) Immediately after a sale container has been filled with milk and closed it shall be marked clearly with the name and address of the dairyman by whom it was so filled and, where such milk is whole milk, the container shall also be marked with the day of the week on which such milk was produced.

"(5) After a sale container the capacity of which does not exceed one quart has been filled no person except a person having statutory authority so to do shall open such sale container at any time after it has left the premises where it was filled and before it is delivered to the consumer.

"(6) No person shall put any milk into or sell any milk in a sale container in respect of which any provision of this Article has not been complied with.

"42. (1) Every sale receptacle shall be provided with a tap by means of which such receptacle can be emptied.

"(2) No person shall take milk from a sale receptacle for sale by retail except by means of the tap in such sale receptacle.

"(3) No person shall sell any milk which has been contained in a sale receptacle in respect of which any of the provisions of this Article have not been complied with.

"(4) No person shall keep milk in or sell milk from a sale receptacle which does not comply with the provisions of this Article.

"23. Every tap in a vessel through which milk is to be drawn shall be capable of being easily removed from such vessel and dismantled for the purpose of cleansing and sterilisation."

The above summary and quotations are merely some of the rules contained in Part II. of the Regulations, which I consider of absolute importance. Dairymen should study this Part of the Regulations with the greatest care. Every one can see that these ordinances are very valuable in preventing diseases caused by uncleanly methods or diseased animals.

Part iii. of the Regulations deals with inspection of dairies, etc., and requires an inspection once every three months.

The following are inspecting officers :—

- (a) For a sanitary district:
 - (i) the medical officer of such sanitary district;
 - (ii) any sanitary sub-officer of the sanitary authority of such sanitary district or any other officer of such sanitary authority duly authorised for that purpose by such sanitary authority.
- (b) An assistant county medical officer of health shall be an inspecting officer for the area for which he acts.
- (c) Any person who has been appointed to be an assistant medical officer of health of a county borough shall be an inspecting officer for such county borough.
- (d) The medical officer of health of a dispensary district shall be an inspecting officer for such dispensary district.
- (e) Any veterinary officer of a sanitary authority shall be an inspecting officer for the area for which he acts.
- (f) Any person who has been appointed by a sanitary authority to be a dairy inspector shall be an inspecting officer for the area for which he has been so appointed.

Part IV. deals with inspection of milch cows and requires an inspection once every six months.

The schedule to these Regulations is as under-quoted :

“Procedure to be followed in washing vessels, appliances, receptacles, etc.

1. The vessel or appliance shall be rinsed with cold potable “water.

“2. Before the vessel or appliance is again used it shall be “washed clean with tepid potable water, then scalded with boiling “water or steam, and then allowed to dry without contact with “any cloth or similar substance.

“(3) Where the scalding required by the next preceding “rule is carried out with boiling water either the vessel or ap- “pliance shall be immersed in the boiling water or a quantity “of boiling water equal to one quarter of the capacity of the vessel “or appliance shall be used.

Now to summarise this Act and the Regulations in so far as preventive medicine is concerned is not so difficult. The dangers

of milk contamination have been shown: Part V. of the Act gives power to prevent contamination of milk by "carriers" or cases of disease who may be connected with the milk supply. Part VI of the Act gives power to deal with cases in diseased animals that may be supplying milk. The Regulations furnish a covering code to ensure that the preparation and distribution of milk is carried out under reasonably clean conditions and that contamination will not take place.

What is required? Sound clean herds, clean dairy premises, etc., clean healthy milkers, clean delivery.

PROPOSED INITIAL ADMINISTRATION.

In Louth there are the two urban districts of Dundalk and Drogheda, and the County Health District, comprising three areas, viz, Dundalk Rural, Ardee Rural and Louth (Drogheda) Rural.

The District Medical Officers of Health of Dundalk Urban District are Dr. E. M. McEntegart and Dr. T. A. Daly. The District Medical Officers of Health of Drogheda Urban District are Dr. P. D. McCullen, Dr. P. J. Murray and Dr. J. Hardy.

There are 13 District Medical Officers of Health in the County Health District as hereunder stated :—

Dr. H. J. Moore, Ardee Dispensary District;
 Dr. M. J. O'Neill, Barronstown Dispensary District;
 Dr. E. M. Finegan, Carlingford Dispensary District;
 Dr. P. J. Butterly, Castlebellingham Dispensary District;
 Dr. E. M. McEntegart, Dundalk (R) No. 1 Dispensary District;
 Dr. T. A. Daly, Dundalk (R) No. 2 Dispensary District;
 Dr. J. J. Donegan, Dunleer Dispensary District;
 Dr. J. J. Moonan, Ravensdale Dispensary District;
 Dr. P. D. McCullen, Drogheda (R) No. 1 Dispensary District.
 Dr. P. J. Murray, Drogheda (R) No. 2 Dispensary District;
 Dr. J. Hardy, Drogheda (R) No. 3 Dispensary District;
 Dr. M. McCann, Termonfeckin Dispensary District.
 Dr. J. Faul, Louth Dispensary District.

The Veterinary Inspector appointed to Dundalk Urban District is Mr. J. T. Clinton, M.R.C.V.S., and to Drogheda Municipal District, Mr. A. A. Donnelly, M.R.C.V.S.

In regard to the County Health District, the duties of veterinary inspection in Dundalk Rural are carried out by Mr. J. T. Clinton, and in Louth (Drogheda) Rural by Mr. T. H. Sherlock, M.R.C.V.S. No permanent appointment has been made, following the resignation of Mr. H. F. McCaughan to Ardee Rural District, but Mr. E. O'Donnell holds the temporary position.

Mr. Hand, S.S.O., holds the position of Dairy Inspector to the Louth (Drogheda) District and Mr. Finegan, S.S.O., and Mr. Mathews, S.S.O., are appointed to the Ardee Rural District. No dairy inspectors are appointed to the Urban districts of this county or the Rural district of Dundalk.

The attention of dairymen will be called to the requirements in regard to registration, etc., and to the date on which the Regulations come into force, by public advertisement by the three local authorities, as soon after January 1st, 1937, as is reasonably possible.

The County Medical Officer will make an initial inspection of all the dairy premises registered in the previous year, accompanied by the Veterinary Inspector or the Dairy Inspector. This inspectional tour will take place during the last half of 1937, if possible.

Dairyowners will make formal application on the prescribed form in duplicate to the Secretaries of the local authorities concerned.

The local authorities will retain one copy of the form of application and forward the other copy to the County Department of Health.

The County Department of Health will forward a list of the names and addresses of all dairymen who have applied for registration to the Veterinary Inspectors concerned, who will furnish a report on each premises on a Dairy Inspection Card (vide appendix 2), to the County Department of Health with a statement as to whether registration is advised.

The County Department of Health will in due course inform each local authority as to whether registration should or should not be permitted. If on consideration of the reports received, the County Department of Health considers that the premises of a dairyman, or the methods of milk preparation, etc., are unsatisfactory, the County Department of Health will advise the local authority concerned and will state the reasons for which in the interests of the public weal, the application can not be recommended.

The above is merely a very sketchy outline of the initial administration which is required and will call for considerable elaboration and enlargement as time goes on. I have already stated that the Act and Regulations are static, the work under the Act must be dynamic.

The existing Dairy Inspection Cards may be modified in due course, but a detailed account of each dairy must be available in the County Health Department.

Inspection of milch cows is required at six monthly intervals; inspection of dairy premises is required at three monthly intervals. The former inspection can only be carried out by the Veterinary Inspector, but the latter may be carried out by the C.M.O.H., D.M.O.H., V.I., S.S.O., or Dairy Inspector. Administrative measures will require to be taken to ensure the necessary inspections within the stipulated periods. In my opinion it is desirable that a Dairy Inspector should be appointed to each district to work under the direction of the Veterinary Inspector, and to carry out local liaison with the D.M.O.H. I consider that the

V.I. is the officer of the local authority who is most competent to supervise these duties and to carry out the work under the direction of the County Department of Health.

The County Department of Health is in a position to carry out the administrative supervision. Liaison, which only County Departments of Health can operate, will be necessary between the various local authorities and departments of health of neighbouring counties, and between veterinary inspectors and district medical officers of health.

As an example of what will be required, I give the following instance: a dairyman supplies milk to one of our towns and its rural environments, but his farm is situated in a neighbouring county. The dairyman will have to register with the Louth Board of Health, as health authority for the rural environs of the town, he will secondly have to register with the sanitary authority of the town, and thirdly, he will have to register with the sanitary authority where his farm is situated. And this is quite right. Each district is responsible for the health of its own population. No local authority should be penalised because its neighbours are slack in public health control. Each authority must have the power of refusing what it considers bad milk. It is very little trouble for the dairyman to fill the necessary forms of application. The local authorities in the home county can have inspections made of mode of delivery, vehicles, etc., in such a case, and the home county department of health can obtain information for the neighbouring county department of health re conditions of the farm, etc. Sampling is also important in such a case, as each authority should be satisfied from the reports submitted by the sampling officer that the milk supply, no matter where it is coming from, is good.

It is evident, however, that to efficiently report on such a dairy the County Department of Health will have to consider three reports, one from a neighbouring county, and two from veterinary inspectors of local sanitary authorities. It will be some time before the machinery necessary for the able administration of this Act is running smoothly. This is, however, a beginning and that is good. The type of remark frequently heard is something on the following lines: "A pure milk supply, I have been advocating it for years, and it is quite time a start was made."

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List of Cow-keepers, Dairymen and Purveyors registered in County Louth during 1936

DUNDALK RURAL DISTRICT.

George Brown, Millgrange, Greenore, Dundalk.
 John P. Byrne, Louth, Dundalk.
 Michael Begley, Clermont Park, Haggardstown.
 Mrs. L. S. Blakely, Long Avenue Road, Dundalk.
 David Carmody, Clermont Park, Dundalk.
 Richard Cox, Lisnawilly, Dundalk.
 John Cox, Mountbailie, Dundalk.
 Patrick Corcoran, Avenue Road, Dundalk.
 John Duffy, Philipstown, Dundalk.
 James Flynn, Newtownbalregan, Dundalk.
 Patrick Farrelly, Saltown, Castletown, Dundalk.
 Peter Goss, Lurgankeel, Kilcurry, Dundalk.
 Thomas Garvey, Upper Merches, Dundalk.
 Patrick Gernon, Knockcor, Knockbridge, Dundalk.
 James Kelly, Greycare, Kilkerley, Dundalk.
 Mrs. Annie Lennon, "Sunlock," Point Road, Dundalk.
 Peter Murphy, Haggardstown, Dundalk.
 John Murray, Mountpleasant, Dundalk.
 John Murphy, Red Cow, Dundalk.
 Matthew Murray, Donaghmore, Kilkerley, Dundalk.
 Mrs. M. M'Dowell, Marsh Farm, Dundalk.
 Miss Jane M'Dowell, Mullaharlin, Dundalk.
 Richard M'Dowell, Heynestown Cottage, Dundalk.
 William M'Kenny, Mount Avenue, Dundalk.
 Michael M'Kevitt, Kilkerley, Dundalk.
 Miss Jane M'Geough, Haggardstown, Dundalk.
 Owen M'Shane, Carrickedmond, Kilcurry, Dundalk.
 B. M'Keown, Newtownbalregan, Dundalk.
 Philip M'Cann, Balregan, Kilcurry, Dundalk.
 Arthur O'Hare, Lisdoo, Dundalk.
 Charles Quinn, Castletown Cross, Dundalk.
 Brigid Smith, Moorland, Dundalk.
 Joseph Shields, Woodview Tce., Castletown, Dundalk.
 Charles Sandys, Heynestown, Dundalk.
 James Thornton, Carlingford, Dundalk.
 Thomas Tennyson, Newtownbalregan, Dundalk.
 John Taaffe, Castletown Road, Dundalk.
 Lucy Woodney, Greenore, Dundalk.
 Michael Wallace, Seafiel, Blackrock, Dundalk.
 Bernard Wallace, Ballinurd, Kilkerley, Dundalk.
 Peter Kerr, Dowdallshill, Dundalk.
 Patrick Lynch, Dowdallshill, Dundalk.
 J. M'Guinness, Readypenny, Castlebellingham.
 James Hoey, Commons, Dromiskin.
 Mrs. Margaret Neary, Whiterath, Dromiskin.

DROGHEDA RURAL DISTRICT.

James Bellew, Killineer, Drogheda.
 John Bannon, Killineer, Drogheda.
 Patrick Bellew, Begrath, Drogheda.
 Peter Byrne, Clogherhead, Drogheda.
 Anne Byrne, Clogherhead, Drogheda.
 James Brannigan, Balgathern, Drogheda.
 Rev. John P. Barcroft, Mellifont Rectory, Tullyallen.

Thomas Caulfield, Tullyallen, Drogheda.
 Patrick Clarke, Drybridge, Drogheda.
 Mrs. T. Cooney, Barnattin, Drogheda.
 William Curran, Rose Hall, Killineer, Drogheda.
 James Clarke, Ballymakenny, Drogheda.
 Charles Creaser, Townrath, Drogheda.
 Laurence Campbell, Hitchenstown, Drogheda.
 Andrew Coyle, Townrath, Drogheda.
 Michael P. Commons, Newtown, Monasterboice, Drogheda.
 Richard Campbell (Grocer), Clogherhead, Drogheda.
 Edward Downey, Waterunder, Drogheda.
 William J. Drew, Waterunder, Drogheda.
 John Drew, Waterunder, Drogheda.
 Michael Drew, Killineer, Drogheda.
 Peter Downey, Culfore, Monasterboice, Drogheda.
 Mrs. M. Devin, Riverstown, Monasterboice, Drogheda.
 John Drew, Braughan, Drogheda.
 James Finnegan, Wallace's Row, Drogheda.
 Mrs. Mary A. Gogan, Mayne, Clogherhead, Drogheda.
 Miss Mary A. Halligan, Banktown, Drogheda.
 Mrs. John Healy, Hill of Rath, Drogheda.
 Mrs. Margaret Healy, Drybridge, Drogheda.
 Michael Healy, Waterunder, Drogheda.
 Patrick Henry, Termonfeckin, Drogheda.
 Brigid Halligan, Coolfore, Monasterboice, Drogheda.
 William Johnstone, Drybridge, Drogheda.
 Thomas Kelly, Twenties, Drogheda.
 Thomas Kearney, S.S.O., Clogherhead, Drogheda.
 James Kerr, Twenties, Drogheda.
 Capt. Michael Donnelly, Termonfeckin, Drogheda.
 Mrs. J. Lynn, Tullyesker, Drogheda.
 Mrs. Veda Lentaigne, Termonfeckin, Drogheda.
 Michael Ledwith, Newtown, Drogheda.
 Matthew Moonan, Killineer, Drogheda.
 William Moonan, Balgathern, Drogheda.
 James Mullen, Greenbatter, Drogheda.
 James Mathews, Hill of Rath, Drogheda.
 Peter Murphy, Manimore, Drogheda.
 James M'Ginn, Killineer, Drogheda.
 Patrick Moore, Cartown, Drogheda.
 Charles Mathews, Skylea, Drogheda.
 Mrs. N. L. Murphy, Hill of Rath, Drogheda.
 Thomas Moonan, Bgrath, Drogheda.
 Patrick Marry, Lynch's Cross, Tullyallen.
 Michael Mullen, Riverstown, Monasterboice.
 Thomas Mullen, Newtown, Monasterboice.
 Nicholas M'Guinness, Tullyallen, Drogheda.
 Thomas M'Cann, Ardbolis, Clogherhead, Drogheda.
 Patrick Murphy, Keerhan, Townley Hall, Drogheda.
 James M'Evoy, Clogherhead, Drogheda.
 Thomas M'Cann, Newtown, Drogheda.
 Brigid Norris, Waterunder, Drogheda.
 James Norris, Townrath, Drogheda.
 Patrick Owens, Twenties, Drogheda.
 William O'Connor, Sheepgrange, Drogheda.
 Peter Pentony, Drybridge, Drogheda.
 Mrs. M. Pentony, Coolfore, Balgathern, Drogheda.
 Patrick Roache, Tullyallen, Drogheda.
 Mary J. Rath, Clogherhead, Drogheda.
 Patrick Reilly, Clogherhead, Drogheda.
 John Roache, Manimore, Drogheda.
 John Roache, Ballymakenny, Drogheda.
 Mrs. Patrick Sullivan, Killineer, Drogheda.
 John Sweeney, Newtownstalaban, Drogheda.
 William Sullivan, Yellowbatter, Drogheda.
 Patrick Tierney, Tullyallen, Drogheda.
 Patrick Tuite, Tullyallen, Drogheda.
 Ruth Townley, Tullyallen, Drogheda.
 Philip Tuite, Strand Street, Clogherhead.
 Martha Woods, Tullyallen, Drogheda.
 Mrs. William Gogan, Hackett's Cross, Clogherhead.

M. M. Dolan, Gallstown.
 Vincent Kelly, Morganstown.
 Thomas Kilduff, Philipstown, Drogheda.
 Patrick M'Kenna, Clonmore, Dunleer.
 Patrick M'Donnell, Prieststown House, Dunleer.

ARDEE RURAL DISTRICT.

Patrick Campbell, Market Street, Ardee.
 E. F. Casey, Market Street, Ardee.
 Patrick Donegan, Blakestown, Ardee.
 F. J. Finnegan, Drummond Farm, Ardee.
 W. R. Filgate, Lisrenny, Ardee.
 William Gilmore, Rathneistin, Ardee.
 Mrs. James Malone, Irish Street, Ardee.
 Thomas M'Guinness, Tisdale Street, Ardee.
 Thomas M'Nello, Market Street, Ardee.
 James M'Cartney, Market Street, Ardee.
 Edward M'Kenna, Castle Street, Ardee.
 Mrs. John M'Creanor, Old Chapel Lane, Ardee.
 Mrs. Minnie Moonan, Castle Street, Ardee.
 James T. M'Gee, Roodstown, Ardee.
 Thomas M'Entegart, Fair View, Ardee.
 James Roe, Fair Green, Ardee.
 Mrs. Mary Reilly, Castle Street, Ardee.
 Thomas White, Hale Street, Ardee.
 Mrs. C. F. Barrow, Milestown, Castlebellingham.
 Thomas Brennan, Painstown, Dromin, Dunleer.
 Michael Bellew, Collon.
 James Butterly, Skeaghmore, Dunleer.
 Mrs. Brigid Commons, Dunleer.
 Michael Callan, Paughanstown, Dunleer.
 John Clarke, Toberdoney, Dromin, Dunleer.
 Thomas Durnin, Hammondstown, Dunleer.
 Stephen J. Feehan, Braganstown, Castlebellingham.
 Miss R. A. Garstan, Braganstown, Castlebellingham.
 Albert J. Jeffers, Drumleck, Castlebellingham.
 Thomas Johnson, Salterstown, Dunleer.
 Patrick Landy, Philipstown, Dunleer.
 Anna M. Meehan, Tisdale Grove, Cappoge, Dunleer.
 Mrs. Rose Morgan, The Pump, Dunleer.
 M. A. Mathews, Cappoge, Dunleer.
 Charles M'Keever, Collon.
 Robert M'Dowell, Dunany, Dunleer.
 James M'Grane, Burren House, Dunleer.
 Mrs. Mary M'Gee, Castlebellingham.
 Mrs. Julia M. Reilly, Derrycama, Castlebellingham.
 Patrick Sherlock, Collon.
 Henry Sloan (Jun.), Castletown, Dunleer.
 Edgar Treadwell, Castlebellingham.

DUNDALK URBAN DISTRICT.

Joseph Brickell, Barrack Street, Dundalk.
 F. Bishop, Dublin Street, Dundalk.
 Catherine Garland, Mill Street, Dundalk.
 Mrs. Mary Hughes, Roden Place, Dundalk.
 John W. M'Dowell, Marsh Farm, Castlebellingham.
 James Flynn, Bridge Street, Dundalk.
 Bernard Wallace, Ballinurd, Kilkerley.
 Matthew Murray, Donaghmore.
 James M'Donald, Seatown, Dundalk.
 Peter Byrne, Mary Street South.
 Paul Russell, Dublin Street, Dundalk.
 Mrs. Margaret Duffy, Ramparts, Dundalk.
 John Duffy, Philipstown, Hackballscross.
 John Clarke, "Verbena," Dublin Road.
 Thomas King, Barrack Street, Dundalk.
 Patrick Hamill, Seatown, Dundalk.
 Robert Kelly, Greyacre.

Mrs. Patrick Hughes, Park Street, Dundalk.
 Matthew Pepper, Stapleton Place, Dundalk.
 Patrick Conroy, 2, Ladywell Terrace, Dundalk.
 Patrick Lynch, Dowdallshill.
 Hugh Lambe, Linenhall Street, Dundalk.
 Kate Cunningham, Mooreland.
 Mrs. Anne Lennon, "Sunlock," Point Road.
 John Callan, Peter Street.
 James Hoey, 37, Bridge Street.
 Jane M'Geough, Haggardstown Cross.
 Mrs. L. S. Blakely, Long Avenue.
 John Coe, Point Road, Dundalk.
 Patrick Grimes, 5, Bridge Crescent.
 William Carroll, 15, Cuchullain Terrace.
 John Murray, Claretrock, Mountpleasant.
 John Taafe, 20, Castletown Road.
 Edward Goodman, "Springmount," Dublin Road.
 R. D. Cox, Lisnawilly.
 Michael Begley, Clermont Park.
 Frank Bourton, Distillery Lane.
 John Larkin, Hill Street.
 Margaret Reilly, 17, M'Swiney Street.
 George Coburn, 18, Emer Terrace.
 Peter Goss, Lurgankee, Kilcurry.
 Peter M'Donnell, 10, Castletown Road.
 James M'Keown, 8, Castletown Road.
 John Murphy, Redcow, Dundalk.
 Richard M'Dowell, Heynestown.
 Thomas Harrison, Newtownbalregan.
 Thomas Tennyson, Newtownbalregan.
 John Gosling, Hill Street, Dundalk.
 John Wynne, Tara Hotel, Park Street.
 Patrick F. Deery, Chapel Street.
 Owen Martin, Hill Street.
 Margaret Clearkin, Chapel Street.
 Mary Quigley, Park Street.
 Michael Dardis, 65, Park Street.
 Felix M'Ardle, Demesne.
 Kathleen Fitzsimons, 1, Bachelor's Walk.
 Frank Morgan, Lisdoo, Dundalk.
 Patrick Kirk, Castletown Road.
 Brigid M'Entee, 5, Maxwell's Terrace.
 Michael Carroll, Bridge Street.
 Peter Lynch, Bridge Street.

DROGHEDA URBAN DISTRICT.

Thomas M'Hugh, Windmill Lane, Drogheda.
 Peter Callan, Magdalene Street, Drogheda.
 George Callan, George's Street, Drogheda.
 Joseph Burke, Duleek Street, Drogheda.
 Thomas M'Enteggart, Newtown, Blackbull, Drogheda.
 Mrs. Clare M'Evoy, The Gardens, Patrick St., Drogheda.
 Thomas Clarke, Rathmullen, Drogheda.
 Owen Fay, Congress Avenue, Drogheda.
 James Mathews, Crushrod Lane, Drogheda.
 Peter Barnes, Beamore Road, Drogheda.
 Thomas Donnelly, Battle Lane, Drogheda.
 Thomas Devine, Beamore Road, Drogheda.
 James Kierans, Newfoundwell, Drogheda.
 Mrs. Margaret Kelly, 23, Duleek St., Drogheda.
 Gerald Downey, John St., Drogheda.
 George Cocney, Duleek St., Drogheda.
 Charles Monaghan, Wellington Quay, Drogheda.
 Maurice B. Allen, The Grove, Drogheda.
 Peter Sarsfield, Hardman's Garden, Drogheda.
 William Murphy, John St., Drogheda.
 James Murray, Trinity St., Drogheda.
 Mrs. Anne Dolan, Brookville, Drogheda.
 Miss Elizabeth Keelan, Clinton's Lane, Drogheda.

Vincent M'Cormack, Coolagh St., Drogheda.
 Mrs. Ellen Connor, Priest's Lane, Drogheda.
 Patrick J. Kelly, Mell, Drogheda.
 Michael Kavanagh, Hardman's Garden, Drogheda.
 James Smart, Weirhope, Drogheda.
 Patrick Murphy, Upper Mell, Drogheda.
 Mrs. Gertrude Winters, Stoney Lane, Drogheda.
 Edward Keleghan, Platten Road, Drogheda.
 Patrick Segrave, Scarlet St., Drogheda.
 Mrs. Mary Boyle, Duleek St., Drogheda.
 Mrs. N. B. Lyons, Trinity St., Drogheda.
 Mrs. Elizabeth Collins, Ballymakenny Rd., Drogheda.
 Mary A. Fagan, Sandyford Terrace, Drogheda.
 John Clarke, Mell, Drogheda.
 Frank Harte, Crushrod Lane, Drogheda.
 Patrick Hughes, Newtown, Stameen, Drogheda.
 Michael Stafford, Duleek St., Drogheda.
 William Johnston, Drybridge.
 John Sweeney, Newtownstalaban.
 James Mullen, Greenbatter.
 Mary Campbell, Green Lanes.
 Mary Sullivan, Killineer.
 John Durnin, Mornington.
 Gerald P. Barrett, Eastham House, Bettystown.
 Mrs. Cecilia Moore, Sunday Gate.
 Cecilia O'Brien, Windmill Road.
 Thomas M'Evoy, Bryanstown.
 Peter Pentony, Drybridge.
 James Finegan, Yellowbatter.
 Patrick Moore, Cartown, Ballymakenny.
 Mathew Regan, Newtown, Platten.
 Thomas Kilduff, Philipstown.
 Capt. E. T. Boylan, Hilltown, Meath.
 Andrew Coyle, Townrath.
 John Drew, Waterunder.
 Elizabeth Downey, Newtownstalaban.
 Mary Penders, 1, Barrack St.
 James Mathews, Hill of Rath.
 Michael Healy, Waterunder.
 James Bellew, Killineer.
 Patrick Clarke, Drybridge.
 Mathew Langan, Beamore.
 Patrick Reid, Ballymakenny.
 James Dolan, Sunday Gate.
 Annie Phillips, North Road.
 Josephine M'Creesh, St. Peter Street.
 Margaret Healy, Drybridge.
 Mrs. Anne Bellew, 9, Bolton Street.
 Francis D. & Gerald A. O'Reilly, Castlepark, Stackallen.
 Mrs. Elizabeth M'Keon, James' Street.
 Mrs. Veda Lentaigne, Termonfeckin.
 Andrew J. Curran, Rathmullen.
 John Roche, Manimore.

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SAFE MILK—PASTEURISATION.

While there is no doubt that vast improvements can and will be made in the public milk supply in the next few years, the subject is much too important to justify a self-satisfied policy in regard to what can and will be done. The campaign for safe milk, as apart from what is generally known as clean milk, should be relentlessly pursued. Even if a man keeps a cow for the use of his own household, his cow is part of the dairy stock of the country. Further, it is not kind to permit a man to poison even his own family with germ laden milk. The position will be more satisfactory when no one can escape registration, and when no milch cows can escape veterinary inspection. Pure, safe milk can be supplied at an economic price, the Corporation

of Glasgow has its own farm and supplies the hospitals and welfare centres with Grade A (T.T.) milk at 1/3 per gallon, thereby saving the ratepayers approximately 4d. per gallon. This cannot be done everywhere, but more and more extension of veterinary inspection will be more and more repaid in national health.

In the meantime pasteurisation is, in my opinion, the only sure way to guarantee an absolutely safe milk supply. In years to come, when the dairy herds of this country have been freed from tuberculosis and the method of preparing milk for sale is better perfected, other views may be held, but not now.

In the Annual Tuberculosis Report for 1929, I stated: "With regard to the paragraphs which have appeared with such regularity in the 'Annual T.B. Reports for years anent milk supply, some progress may be reported in this respect, in that improvement will inevitably follow the various inspections and other administrative actions now being initiated."

"Much work, however, remains to be done before purity can be guaranteed, and it is urged on all those who have the care and feeding of young children to sterilise milk unless it comes from a source guaranteed free from T.B. The loss of certain vitamin content is certainly of less importance than the freedom from tubercle bacilli. Non-pulmonary cases are usually due to tubercle bacilli obtained from milk, and are most frequent in children. The bridge from the infected cow to the human being is milk, and pasteurisation eliminates the danger of the bridge. Vitamins are obtained from other food supplies which are not potential disease transmitters."

The position is still the same, and the position will remain the same for many years. The cleanliness of the dairies has improved somewhat since 1929, the reports printed as appendices year by year since 1929 from our Veterinary Inspectors may be regarded as denoting a general improvement. Still, while the pulmonary tuberculosis death rate has steadily fallen, the non-pulmonary death rate has remained constant. In 1911, when the County Tuberculosis Scheme started, it was 24, in 1936 it is 25. While it has fluctuated through the intervening years, it has never shown any real signs of progressive decrease, or increase.

In 1932 the County Department of Health procured a Minit Dirt Tester, and the various Sub-Sanitary Officers obtained samples of most of the milk supplies of this county. This apparatus strains a pint of milk through a white disc of absorbent material which shows gross contamination present. The results of these tests generally indicated that even if more careful straining was carried out, pasteurisation would still be advisable. The position may have, and I hope it has, improved since then. Of course the Milk Dirt Tester only gives evidence of gross contamination, but where there is a yellowish or greenish-brown stain on the disc, there are bound to be numbers of bacteria. With luck, none of these bacteria will be pathogenic to man, or perhaps the person drinking the milk will be immune, by long usage, to the strains of bacteria that he imbibes. Nevertheless it is better to drink these bacteria when they are dead. There is no evidence to show that the drinking of organisms killed by pasteurisation of milk produces any ill-effects. Further, it is very necessary in the case of infants and young children to make sure that the milk they drink is not teeming with live bacterial life.

The Maternity and Child Welfare Committee of the Borough of Leyton came to the conclusion in 1929 that pasteurised milk was best for general purposes. This finding was based on the opinion of their Medical Officer of Health (Dr. A. W. Forrest), whose recommendations in his annual report are summed up as follows: "Dried milk as supplied by reputable firms is manufactured under conditions almost ideal; is free from pathogenic organisms, has a constant fat content, and when in use is less likely to be contaminated than ordinary liquid milk, and less likely to be diverted to purposes other than those for which

"it is issued. When fresh fruit juice is used as well, the vitamin question is settled. Grade A (T.T.) milk is unfortunately not absolutely safe from tubercle, as herd testing is not infallible, and the experience of the borough analyst shows that the grading of milk is "no guarantee of bacteriological purity, and the occasional presence of "the bacillus coli communis indicates that contamination does occur. "Pasteurised milk, in all cases examined, was found to be free from "this objection, and, further, when pasteurisation is properly carried "out, the vital properties of raw milk remain unimpaired; but the "organisms of scarlet fever, diphtheria, enteric fever, dysentery, tuberculosis and septic sore throat. i.e., the chief diseases spread by unclean "milk, are destroyed."

Many arguments have been put up against pasteurisation, but latterly a very great majority of opinion is strongly in favour of the process when properly carried out.

Personally I am of the opinion that if a milk supply is open to suspicion, and if efficient bulk pasteurisation is not possible, it is best to have the milk rapidly raised to a sufficient temperature in the home, prior to use.

The arguments against pasteurisation are briefly, that the process destroys or reduces Vitamin C content, that it diminishes calcium, phosphorus and iodine content, that the nutrient value is reduced, and that it is unnatural.

The answers briefly are, raw cow's milk can not be relied on to supply Vitamin C. This vitamin is often absent in raw milk.

Cow's milk contains more calcium and phosphorus than human milk, and the reduction is an advantage. Iodine content of milk is not constant; very little is known concerning the requirements of iodine by infants, or the good or bad effect which the slight alteration in this content, caused by pasteurisation, may bring about. Observations prove no difference in the nutritional value between raw and pasteurised milk.

It is no more unnatural to use knowledge and pasteurise, than it is to cook our food. At some remote period probably, comparable comment was made in simple languages, concerning the unnatural tendencies of certain advanced thinkers who were garbing themselves in the skins of dead animals.

Some opinion avers that pasteurisation permits or encourages uncleanliness. This is not so. Milk can not be efficiently pasteurised except it is reasonably clean. It is stated that efficient pasteurisation is not a concealer, but a revealer of faults in milk.

Pasteurisation has been worked on a national scale in America for many years, with excellent results. It is realised that it is not always practical in rural areas, but, as matters stand, it is an ideal.

There is no reason why sterilisation of milk should not be carried out in the home, at least in regard to all supplies for infant feeding. Sterilisation and pasteurisation of milk need only be regarded as expedients until such time as a clean and safe milk supply can be guaranteed.

Under Part IV of the Act, provision is made for the sale of milk under special designations, and the work carried out under this legislation will be of great importance.

I repeat, the campaign for clean, safe milk must be energetically pursued. The expenses incurred on efficient and sufficient sampling, supervision, etc., are more than balanced by the results which will eventuate from a safe milk supply. It has been estimated that every case of bone tuberculosis in a child costs £400. Allowing that figures re cost of treatment may vary locally, the cost of hospital treatment

for surgical tuberculosis in this county during 1936 was, I am informed, £1,180 3s. 4d. This, be it noted, does not include the cost of dispensary and other treatment. Further, the estimate is purely cash. It takes no account of suffering involved, by the parents who see their children die, very often slow, patiently borne, lingering deaths, or who watch their children grow up cripples. It takes no account of the pain and misery and blighted hopes of the patients themselves.

Then let us, if we will, take an easy line, and operate this Act without reasonable stringency—as good laws have sometimes in the past been administered—and what will be the result?

There will be just as much opposition, irritation and friction occasioned, and there will be no other result, save one—a waste of public money.

Other countries in which a tremendous amount of work has been done during the past twenty years in improving the milk supplies, are now starting in earnest the "Drink More Milk" campaign.

The great danger to communal health, which is to be guarded against, is lest such a slogan should be adopted here, before the necessary earnest work in improving milk supplies has been not only instituted, but completed.

Before a "Drink More Milk" campaign can be inaugurated with safety, this Act, at least, must be fully and efficiently operating, and the results must be apparent.

In hurriedly writing this chapter in the midst of many other duties, I feel that if more leisure had been available, I could have arranged the subject in a clearer form. If reiteration of data is noted, it may be known that the facts which are repeated have already been reported so very often in the literature on the subject, that it is difficult to prevent them from constantly obtruding on the line of thought. Under such circumstances, repetition is not a fault, it is merely an over-emphasis.

The importance of a safe milk supply cannot be over-emphasised.

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Veterinary Inspectors' reports are published as appendices 3, 4 and 5. Mr. T. H. Sherlock, M.R.C.V.S., was appointed to Louth (Drogheda) Rural District during the year, but has not been long enough in office to call for a written report on this district for 1936.

During the year under review Mr. McCaughan, M.R.C.V.S., resigned the position of Veterinary Inspector, Ardee (R.) District. A permanent appointment to fill the vacancy has not yet been made, and therefore a written report has not been called for from this district. The temporary appointment is held by Mr. E. O'Donnell, M.R.C.V.S.

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SUMMARY OF RETURNS IN REGARD TO EACH AREA
RECEIVED FROM THE VARIOUS INSPECTORS CONCERNED.

TABLE 1.

LIST OF REGISTERED DAIRIES IN THE COUNTY AND APPROXIMATE NUMBER OF DAIRY CATTLE.

District.	Cowkeepers and Purveyors.	Purveyors only.	Approximate number of Cows Registered Dairies.
Dundalk Urban District	53	30	210
Drogheda Urban District	35	nil.	320
Dundalk Rural District	50		400
Drogheda Rural District	83	83	747
Ardee Rural District	81	41	648

TABLE 2
REPORTS ON DAIRY INSPECTIONS.

District.	No. of Reports.	CATTLE EXAMINED			SEPTIC MASTITIS		SAMPLES OF MILK TAKEN FOR T.B.		SAMPLES OF SPUTUM TAKEN FOR T.B.	
		Cows in Milk.	Dry Cows & Heifers incalf.	Total	Acute	Chronic	Positive	Negative	Positive	Negative
Dundalk Urban	12	900	50	950	nil	nil	nil	nil	nil	nil
Drogheda Urban	12	850	90	940	5	4	2	4	nil	nil
Dundalk Rural	12	750	—	750	nil	4	5	nil	nil	nil
Drogheda Rural	6	747	—	747	nil	nil	nil	nil	nil	nil
Ardee Rural	9	64	186	450	10	nil	nil	nil	nil	4

DAIRY INSPECTORS' REPORTS.
TABLE NO. 3.

DISTRICTS	Dundalk Urban	Dundalk Rural	Drogheda Urban	Drogheda Rural	Ardee Rural
No of Inspections	360	600	136	984	174

PUBLIC MEAT SUPPLY

During the final months of 1936 the C.M.O.H. made a surprise inspectional tour of many of the slaughter-houses situated in the County Health District and Dundalk Urban District.

In regard to the County Health District, some were quite good, the majority only average, and a few bad.

In regard to Dundalk Urban District, while a certain proportion was up to a moderate standard of hygiene, and one was excellent, I regret that I am unable to express myself as at all satisfied with the general cleanliness of many of the premises. I can recall one or two slaughterhouses, which could only be described as very, very bad. It is not possible to report that the bye-laws which the Urban District of Dundalk adopted in 1930 were being observed, on the occasion of my inspections, with more than the most casual or scant attention. That such a disregard for the bye-laws should exist is an impertinence to the local authority that adopted these bye-laws, and to the citizens of the town whose health the local authority guard.

On a second inspectional tour which I carried out, accompanied by the S.S.O. of the Dundalk Urban District, I am glad to be able to state that there was a considerable improvement.

The veterinary inspector's time is now to a very large extent occupied with inspection of meat under the bye-laws governing the sale of meat, and no doubt the slaughter-houses are comparatively clean on the occasions of this officer's visits. The sanitary state of the slaughter-houses is, however, a matter which concerns this office, the local District Medical Officers of Health and the Sub-Sanitary Officer.

I shall not enter into the details of the inspectional tour of slaughter-houses, but the records are filed, copies have been forwarded to the local authorities concerned, and in some cases to the Department of Local Government and Public Health.

I have in many previous years satisfied myself that the sanitary condition of slaughter-houses situated in Drogheda Urban District are satisfactory. Surprise inspections may very likely be held during the coming year, and in the interests of the health of the public, the local authorities will be advised to institute proceedings for all breaches of the bye-laws reported.

The matter of cleanliness of slaughterhouses has got to be taken seriously. The menace of large dumps in congested districts, and even in villages, of manure, paunch manure, blood, offal, heads, horns and bones must cease. Apart from aesthetic

considerations, which make such filthy circumstances undesirable, is there any need to reiterate that the size of the fly population has a relation to such conditions?

Everyone nowadays knows that a house-fly carries disease. Everyone knows the connection between house-flies and infantile diarrhoea. Everyone knows that babies die of infantile diarrhoea.

Typhoid was once endemic in Dundalk and there are still probably carriers of that disease amongst the population. Dundalk should devote special attention to clearing out all possible fly-breeding places.

The bye-laws were not framed by the Department of Local Government and Public Health in jest. These bye-laws were framed with a view to giving all sections of the community a healthy environment in which to live. The danger of a badly-kept slaughterhouse is none the less because it is situated in such a position that it is not exposed to the public gaze. The air belongs to all. No one has a right to pollute the air, and certain of the dumps which I saw in the proximity of slaughter houses did seriously pollute the air.

As the Veterinary Inspector of Dundalk Urban District has said, a solution of the difficulty of many scattered, old-fashioned slaughter-houses may be found in the erection of a public abattoir. However, the proposal to build a public abattoir at some future date does not solve the present situation, or excuse the existing insanitary conditions. So, until such time as a public abattoir is built, the slaughter-houses of Dundalk should be kept in as clean a conditions as is reasonably possible.

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Bye-laws relating to the sale of meat are now reported to be in full operation in both Dundalk and Drogheda Urban Districts.

Report on slaughter-houses and meat inspection are published as Appendices 3, 4 and 5.

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Returns received from the Veterinary Inspectors are summarised hereunder. During the year under review Mr. MacCaughan, Veterinary Inspector, Ardee Rural District, resigned his position on removing from the County. Returns in respect to this district are not, therefore, available. A permanent appointment has not yet been made to this district, but Mr. E. O'Donnell holds the temporary appointment.

Dundalk Urban and Rural Districts:—Cattle: Emaciation, 1. Heads and Tongues (complete): Actinomycosis, 3. Sheep: Distomatosis, 40.

Drogheda Urban District:—Cattle: Tuberculosis (whole), 5; (partial) 1; Traumatism (partial), 6. Sheep: Parasitism (whole), 2; Moribund and Ill-bled, 1; other conditions, 3.

The return of diseases and unsound organs for the Drogheda Urban District gives the following counts:—Cattle: Lungs: Pleurisy, 16; Abscess, 4; Hearts: Tuberculosis, 1; Stomachs, Tuberculosis, 5; Intestines, Tuberculosis, 5; Spleens, Tuberculosis, 4; Livers, Tuberculosis, 7; Distomatosis, 162; Abscesses, 24; Kidneys; Other Conditions, 2; Heads and Tongues (complete), Tuberculosis, 27.

Sheep—Lungs: Pleurisy, 1; Parasitism, 12; Livers, Distomatosis, 320.

Pigs—Lungs: Tuberculosis, 23; Intestines, Tuberculosis, 10; Livers, Tuberculosis, 23; Other conditions, 3; Heads and Tongues (complete) 34.

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BOVINE TUBERCULOSIS ORDER, 1926

It has not been found possible to compile the three returns for 1936, in respect to each of the three districts of this county (Dundalk, Drogheda, Ardee), which were published in the Report for the year 1935.

Information to hand in this office indicates that six cases were reported from Dundalk area, five from Ardee area, and four from Drogheda area. Administrative liaison will be closer established during the coming year, with a view to the annual recording of exact details in regard to the work carried out under this Order.

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HOUSING

Information on this subject will be found in the reports of the Borough Surveyors of Dundalk and Drogheda (vide Appendices 6 and 7).

Work Carried out by the Ardee Town Commissioners is referred to in Appendix 10.

Certain surveys of houses and streets carried out by the C.M.O.H. during 1936 are referred to in Appendix 9.

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The under-quoted table summarises work carried out under this head during 1936:—

	County Health District	Dundalk Urban	Drogheda Urban
Applications received and reported upon during 1936	216	200	300
Number of houses completed and occupied during 1936	34	63	166
Number of houses under construction during year 1936 other than those constructed in connection with Housing Acts, 1931-32	nil	173	2
Number of houses for which schemes have not been authorised	438	30	148
Number of houses under the latter scheme at present in course of construction	38	nil	148
Number of houses proposed to be erected under Compulsory Purchase Orders at present in course of preparation	nil	52	nil

GENERAL SANITATION, SANITARY ADMINISTRATION AND OTHER MATTERS

The reports of the District Medical Officers of Health for half-year ended 31st December, 1936, show the sanitary condition of the County to be in a general satisfactory state.

Housing conditions in all districts are reported to be much improved.

The District Medical Officer of Health for Termonfeckin reports that several houses in her district are unfit for habitation.

The District Medical Officer of Health for Ardee recommends a pump for Hurlestone, and the District Medical Officer of Health for Termonfeckin, reports that the water supply at Baltray is insufficient.

Attention is drawn to the condition of the sewer in Castlebellingham by the District Medical Officer of Health.

A new sewerage system for Ardee, at estimated cost of £13,500 is now almost completed, and the sewerage scheme for Dunleer, at estimated cost of £3,600, is now in progress.

The District Medical Officer of Health for Carlingford recommends the closing of the Burial Ground in Carlingford. The matter is at present under consideration.

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Reports from all Sanitary Sub-officers for the year 1936 are to hand in this Office, and those received from the Sanitary Officers of Dundalk, Drogheda and Ardee are published as appendices (Nos. 8, 9 and 10.)

The drainage, sewerage and sewage disposal are reported as generally satisfactory.

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A new domestic scavenging scheme is being introduced in the Dundalk Urban District, and is under the consideration of the Council.

The public scavenging scheme, adopted by the Drogheda Corporation in 1935, is reported to be working satisfactorily.

The Sanitary Sub-Officer of Clogherhead reports that scavenging in Clogherhead is not satisfactory owing to channels which are swept every week, being laid down in cobble stone, and recommends the installation of concrete channels.

All rural water supplies, analysed during the year 1936, were found to be potable, with the exception of well sunk in Baltray, which was not up to the standard for drinking purposes.

Wells at Calingford, Monavallet, Mullavelley, Faughart, Ballinlough, New Inn, Castletown and Dromiskin are in course of construction.

Attention is again directed to the need of an increased water supply for the village of Collon and for pumps at Hurlestone, Mullenstown and Philipstown N. School.

The need for a water supply at Culfore and Liberties, Carlingford, is also recommended.

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The number of sanitary inspections returned for the County Health District during year 1936 is 3,010, as against 3,246, 2,844, 2,822, 1,578, 2,921, 2,649, 658 and 3,076 for the previous eight years.

The total number of statutory notices served was 81, as against 221, 67, 105, 78, 81, 202, 97 and 55 for past eight years.

The number of informal notices returned for 1936 is 176 as against 210, 138, 181, 285, 286, 126, 70 and 231 for previous eight years.

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A supervisory sanitary inspector is needed and is one of the most necessary officials—either in existence or proposed—in this county. The superintendence of the sanitary state of a county calls for a whole-time, properly qualified sanitary inspector. The advantages of whole-time officials in such positions have been emphasised so often in so many places, by so many people that I need not set them forth here. Further, the advantages of whole-time officials in such positions are so obvious that they need not be repeated so often. In public health work there is no argument against whole-time officials to meet.

There are many factors affecting adversely the health of the public which can not be smoothly and thoroughly eliminated without the supervision which a properly directed County Sanitary Inspector would give. The housing, water and sewerage schemes (costly works) all call for expert minor supervision. There are codes of conduct affecting various matters, which at present exist only on paper. Direction is needed. The rural sub-sanitary officers are inadequately paid, part time and unqualified. The C.M.O.H. and District Medical Officers of Health have now to make detailed inspections and reports on every occasion when legal action appears likely. I venture to suggest that, in proportion to the number of cases which would be taken up, very few cases would result in legal action if a county sanitary inspector were appointed. Neither the C.M.O.H. nor the D.M.O.H. has much time available to carry out minor inspections, largely of a non-professional nature. Their function should be that of expert advisors in such matters. If their evidence is required, carefully prepared reports by a properly qualified sanitary inspector should be available for their consideration. An Assistant C.M.O.H. is also required; I have dealt with the necessity for both these appointments for many years in annual reports and at monthly meetings of the Board of Health and Public Assistance, as the business has arisen for consideration. I see no reason for reiteration of all the advantages which these appointments would ensure. I made my first recommendations for the appointment of a Supervisory Sanitary Inspector in the first annual sanitary report for the year 1928. I made it then in the first year of the County Department of Health, because it was obviously the appointment which was most needed. I made recommendations for the appointment of an Assistant C.M.O.H. in both the Annual School Report and Annual Sanitary Report for the year 1930. These dates are important in considering these matters, for a supervisory sanitary inspector is recorded as being necessary from the first year of the County Department of Health and an Assistant C.M.O.H. from the time when the various schemes were expanding to such an extent as to call for additional professional supervision.

During the year under review a Local Government Board Medical Inspector attended two meetings of the Board of Health and showed the necessity for these appointments. This Medical Inspector analysed the position very fully, and indicated plainly why these appointments should be made. The Board of Health and Public Assistance voted against these appointments in 1936, as they did in 1932; on both occasions the voting was very close, the proposal being defeated by a majority of one. There is no doubt that much opposition to extension of the public health services exists. This opposition argues that expansion is not permissible because such expansion is too expensive. The figures have been given so often, why give them again? They can be found in past reports of one sort and another. Politicians, Government officials, eminent public men not to mention expert sanitarians have frequently stated and proved that money spent on public health is true economy. It would be hardly necessary to repeat their proofs if there was an argument to meet in the rate required—which there is not.

Perchance the situation is not yet clearly understood in even well informed circles. There are grounds for thinking it is not. Public health development is comparatively new in Ireland. Let me give an instance. When the proposal to appoint an Assistant C.M.O.H., and a Superintendent Sanitary Inspector came before the Board of Health and Public Assistance during the year, the Board decided to separate the two recommendations and deal with them seriatim. Now in the first place this did not permit a balanced view of the situation and the necessity for public health expansion. The two positions in 1936 were complimentary to each other; the appointment of an Assistant C.M.O.H. would cause such an increase in work that a Supervisory Sanitary Inspector would be necessary and vice versa.

No matter for that however—when the post of Assistant C.M.O.H. arose for consideration it was gravely mooted that perhaps two extra P. H. Nurses would do as well. The Board, however found that this would cost as much.

It is hardly necessary to casually indicate the many duties which—unfortunately for hard working physicians are of daily occurrence—can not be carried out by a nurse, no matter how good the nurse may be. I understand of course that what was probably intended was an extension of family social work, which would be good, but which requires professional direction.

That point may be passed however. What can not be passed, without comment, is that such a proposition, evinces a confusion of thought concerning the public health establishment required for a county and the situation as it exists in Louth.

At present in Louth the nursing personnel is the only establishment of the County Department of Health which is not understaffed. The medical side of the County Department of Health is understaffed, the sanitary supervision is almost non-existent and the clerical staff is inadequate.

The C.M.O.H. keeps appointments for school medical inspection with the P.H. Nurse (N. Louth), in the 39 schools of her area. The same C.M.O.H. keeps appointments with the P. H. Nurse (S. Louth), in the 39 schools in her area. Was it proposed to divide the schools of Louth into four lots?

The C.M.O.H. keeps weekly appointments with the P.H. Nurse (N. Louth), in Dundalk T.B. Dispensary. He keeps weekly appointments with the P.H. Nurse (S. Louth), in Drogheda T.B. Dispensary, and he keeps weekly appointments with the Jubilee Nurse (Ardee) in Ardee T.B. Dispensary. I shall not attempt to envisage what was the proposal concerning three dispensaries with four P.H. Nurses and a Jubilee Nurse.

All this is not said in any critical spirit of the P. H. Nurses who are conscientious, hard-working officials, whose work is excellent. It is not even critical of the frame of mind which proposes such a brilliant suggestion to excuse the appointment of an Assistant C.M.O.H. It is merely a statement of fact.

Having explained the position I feel that I must stress the good work of the P. H. Nurses who indeed take on many functions which do not properly pertain to their office, to lighten the load on the medical and clerical side of the County Department of Health. Of course, it is not necessary to pay compliments to public health officials—nurses or others—it has been remarked that these officials, the world over, appear to be imbued with an almost fanatical zeal in carrying out their duties.

As a result of the expansion of the responsibilities of the County Department of Health since 1928, and the failure to provide adequate staff, medical, nursing and clerical staff are all required to do extra work. The C.M.O.H. carries out some extra functions, i.e. he makes himself an additional or supernumerary clerk in his own office and conducts an office in his home which deals with as much work as his public office does. On occasions he acts as a supervisory sanitary inspector, but in regard to this the C.M.O.H. can not find time to deal with these duties as they should be operated.

Yet while this understaffing makes it difficult to cover the public health field and makes for jerkiness of administration it never really holds up the work. The under-staffing prevents smooth running efficiency and may leave fields unexplored or only touched, it makes for general sketchiness instead of general thoroughness, but the work proceeds. It is carried out in waves or campaigns and when a campaign is on, that particular work is moderately thorough. With the staff at the disposal of the C.M.O.H. the work must be arranged in this manner, and no permanent hold up is effected. Let me give an instance: diphtheria immunisations, school work and what not, plus routine monopolises all the time that can possibly be squashed into a round of the clock, and bye-laws are being ignored. The bye-laws are not in the first place completely disregarded, it would be more correct to say that a certain slackness in compliance to requirements exists. No qualified sanitary inspector is available in the rural areas to quietly adjust the matter at the start of the trouble. The County Department of Health is aware of what is happening, it is easy to observe the trend of such affairs. Detailed inspection, preparation of reports, and a careful general consideration of the whole business are however necessary if the matter is to be rectified. Time passes and no action is possible—new urgent work plus routine occupies all available time. Gradually the bye-laws are completely ignored and treated with unmerited contempt. Yet inevitably time is eventually found, a series of inspections are made and a deplorable state of affairs is revealed. This makes for harder hitting, more unpleasant work, but no hold up. In time, the persons who have ignored the bye-laws are brought to book much more severely than they would have been if an adequate staff was available. An adequate staff would have been able to quietly keep them up to the mark and suggest to them that the legislature, the local authority and the officials were not framing, proposing and adopting codes of sanitary conduct to cover merely so much paper. When surprise inspections are held under these circumstances, reports are made out. The bye-laws were regarded as mere paper, but the matter is now paper of another sort; the record is there for authorities and

posterity to note and quote at any time. Under these circumstances prosecutions may or may not follow. The bye-laws are probably observed for a somewhat longer period, until they are again ignored and prosecutions do follow. It would all be much more pleasant if adequate staff existed to supervise the observance of the bye-laws, and the potential breakers of the bye-laws would really have a much more pleasant time.

The above is just an example, similar situations are occurring every month in many of the various responsibilities of the County Department of Health.

Perhaps the most interesting and entertaining aspect of having administrative control of an active County Department of Health which is grossly understaffed is in considering the conflicting opinions frequently proffered as to what the public health officer and his staff should be doing.

The parable of the man, the boy and ass would be re-enacted if we changed the policy of the Louth Department of Health to suit every suggestion and everyone's requirements.

Consider a few of the chief lines of thought:

1. It is argued that the school scheme is the major concern, and there are some half a dozen different views as to what particular aspects of school medical service should be specially worked—travelling dental clinics, lectures on health given by the C.M.O.H. and Nurses in schools, etc., etc.

2. It is stated that the T.B. Scheme is the main work and here there are very different views as to how a county tuberculosis service should function. Some will advise specialising in the curative side, and consider that practically all the time of a County Health Department should be devoted to local sanatorium work—X-ray, artificial pneumo-thorax, etc. Yet another school will emphasise that early diagnosis is the domain of the health personnel and advocate facilities for free consultations, liaison with practitioners, bacteriological examination of sputa, screening examination of contacts, etc. Yet again other opinions have been unanimous in expressing a belief that the specialists in the large sanatoria are best fitted to carry out curative treatment and that the medical profession will ensure cases being sent for treatment early enough, if they come for advice early enough. This opinion will state that the health office should amplify the educational and prophylactic side of the work; educate the people to seek medical advice early and to take precautions in regard to general healthy living.

3. A few people have expressed the opinion that not enough publicity is given in regard to various diseases which may affect the national health. They argue that it behoves the health office—inter alia—to specialise more deeply in the control of venereal diseases.

4. Others have started their arguments by first stating that a health office was a sanitary department. Then having the generally accepted definition of sanitary department of the seventies of the last century fixed firmly in their minds, they have proceeded to state their views roughly as follows: Sanitary departments deal in water schemes, sewage schemes, housing, nuisances, etc. From that it is obvious that the entire time of the C.M.O.H. should be occupied in inspections concerning these matters, and that the entire policy of a health office should be, in "pushing" sewage and water schemes, housing reform, etc. This may be called the "Brick" policy. It is very good and very useful in its place. It gives employment and it makes for health. Bricks alone, however, are not going to make a healthy race, whether they be put into houses, hospitals, dairy farms, sewage or water schemes.

5. Exactly the reverse of the last view is that these reforms in housing, water supplies, etc., are bound to proceed in this age at a reasonable rate and that the health office should put all its energies into work of a prophylactic and a curative nature.

There are many other views—expressed and half expressed, self-interested and unselfish—as to the functions of a County Health Department. There is sound sense contained in all the suggestions which I have recorded, although this may appear paradoxical. The County Department of Health cannot attempt to carry out even one half of these suggestions to everyone's liking, without great tact and were adequate staff. The policy of the County Department of Health has consistently been that which was considered to be the correct, most economical and practical, with the staff available. The most necessary of all operations has been worked and will continue to be worked—general health propaganda. What has been done and is being done is known, and I do not propose to restate. It would, however, require more than two Assistant County Medical Officers and a Supervisory Sanitary Inspector to carry out the programme called for, by an adjustment of the five suggestions given above.

The Board of Health have unanimously expressed satisfaction concerning the work of the Department of Health and have stated that they knew the work of the health offices could not be extended. Certain members went further and said that if any breakdown occurred the Board of Health would take the blame. This statement was made by members who voted against the proposal to appoint an Assistant C.M.O.H. Now the Louth Board of Health, as I have stated repeatedly, is a very excellent Board, and to the Chairman and members I acknowledge my indebtedness for the valuable help and judgment which they have accorded, in the past nine years, in administrative matters.

However "public health" is expanding all over Ireland, and many new works have been undertaken by the staff of the Department of Health, since 1932. There has been no breakdown and the Board have not been asked to shoulder the blame.

I remember reading somewhere that in the early stages of local public health development difficulties were bound to be experienced, because by the very nature of their duties public health officials are to a great extent expressing a new view—voicing the claims of masses who have hitherto, in these matters, been inarticulate—the poor.

* * * *

"No longer is the Health Service an affair of 'drains and fevers'; no longer are the sum and height of its ambition the collection of 'returns' and their publication in staggering figures as evidence of work accomplished. That its true and primary function lies in the field of Preventive Medicine may be no new and startling statement, but greater efforts in this direction can and must be made. The formidable obstacles to be overcome are ignorance, apathy, prejudice and vested interests, for they play as great a part in the realm of disease as the whole kingdom of pathogenic organisms itself."

(DR. R. N. BEATTIE)

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APPENDIX 1.

List of Infectious Diseases notified in Louth County during year ended 31st December, 1936

Dundalk Urban District—Population 14,686.

Enteric	Nil
Diphtheria	8
Scarlet Fever	71
Puerperal Sepsis	2
Erysipelas	1
Influenzal Pneumonia	1

Rate—56.51 per 10,000 of the population.

Drogheda Municipal District—Population 14,495.

Enteric	1
Diphtheria	17
Scarlet Fever	2
Puerperal Sepsis	1
Erysipelas	Nil
Influenzal Pneumonia	1

Rate—15.17 per 10,000 of the population.

County Health District—Population 35,113.

Enteric	2
Diphtheria	25
Scarlet Fever	51
Puerperal Sepsis	6
Erysipelas	4
Influenzal Pneumonia	4

Rate—26.20 per 10,000 of the population.

APPENDIX 2.

LOUTH DEPARTMENT OF HEALTH.**INSPECTION REPORT CARD ON DAIRY YARDS.****Occupier****Location**

Milch cows Other cows or heifers Other bovine animals

Health of the cows.No of milch cows Perfect Score } 100 Perfect Score }
for each cow } for all cows }

No. of Cows.	DEFECTS.	Deduction per Cow.	Deductions. Total
	1. Clinical Tuberculosis or	100	.....
	2. Reactors to Tuberculin Test or	25	.....
	3. Tuberculin Test not carried out or its absence for over 14 months or	25	.....
	4. Tuberculin Test applied 12-14 months	10	.....
	5. Inflammatory Disease of Udder ...	100 or less	.....
	6. Diseases or conditions other than above	100 or less	.....

Total deductions for herd**Net Score** **Percentage Score**

Note:—All cows in the cowshed with the milch cows to be scored as part of the herd.

Observations:**Signed****Veterinary Inspector.****Date** 19.....

(With acknowledgements to the City of Dublin Public Health Department)

COWSHED—136	SCORE.			SCORE.	
	Per- fect	Allowed		Per- fect	Allowed
Construction—50					
Impervious floor ...	7		Brought forward	206	
Raised Standing Space	8		UTENSILS—60		
Efficient Channels ...	7		Construction ...	12	
Proper Stall	7		Cleanliness—48		
Good Trough	7		Thoroughly washed		
Compoed up to 4 feet	7		and scalded with		
Upper walls, ceilings			boiling water	20	
and roof ...	7		Sterilized by steam	40	
Daylight ...	12		Protected from con-		
Artificial Light ...	12		tamination	8	48
Ventilation ...	12		MILKING—100		
Cleanliness—50			Small top pail ...	20	
Bedding ...	9		Milking stool ...	6	
Floor ...	10		Facilities for washing		
Walls and partitions	8		hands ...	10	
Roof, rafters and ledges	8		Strainer with cotton		
Troughs ...	8		wool discs ...	6	
Windows and Lights	7		Milk removed immedi-		
YARD—20			ately from shed	6	
Well drained & Clean	10		Fore milk discarded	6	
Removal of manure ...	6		Milking suits ...	6	
W.C. ...	4		Clean, dry hands	6	
DAIRY—20			Udders washed and		
Cleanliness ...	12		dried ...	12	12
Construction ...	8		or Udders (clean)		
WATER SUPPLY—30			wiped with clean		
Good source ...	8		damp cloth	8	
Convenient to			Udders clipped	8	
cowshed ...	11		Tails cut	4	
Convenient for			Cows free from obvious		
washing utensils ...	11		dirt	10	
Total carried forward	206		Efficient Cooling	14	
			Bottling under Proper		
			Conditions	20	
				400	
			Deduction for exceptionally		
			dirty condition, especially of		
			utensils or at milking		
			TOTAL		

Percentage Score.....

OBSERVATIONS re health of attendants, etc., defects, action taken, etc.

Date..... 12..... Signed.....

APPENDIX 3.

*Dundalk Urban District***Dairies, Cowsheds and Milkshops Order**

There are fifty registered Dairy-owners and thirty registered Milk-purveyors in the Dundalk Urban area. The Dairies, Cowsheds and Cows are inspected at regular intervals, and the owners carry out any necessary improvements required in their Cowsheds and Dairies.

The Order has been in existence for almost thirty years, and will come to an end at the beginning of 1937.

A very great improvement has taken place in the Dairies and Cowsheds in both the Urban and Rural districts since the old Order came into force. When I first took charge of the milk supply many of the Dairies and Cowsheds were in a very primitive condition and far from being satisfactory.

Chiefly by "peaceful persuasion," I gradually got improvements made and brought them to what they are to-day, where little fault can be found with them.

The type of cow used in the Dairy herds is much better now than formerly, and the milk supply is a good one.

Public Health (Veterinary Inspection) Order

In the Dundalk Urban District there are thirteen slaughterhouses and thirty butchers' shops. All the meat sold in town is killed within the town, with the exception of that delivered on order by one rural victualler. All of it is inspected, and the whole meat supply is particularly good.

J. T. CLINTON, M.R.C.V.S.

APPENDIX 4.

Dundalk Rural District

Dairies, Cowsheds and Milkshops Order

There are fifty registered Dairy-owners and Cow-keepers in the Dundalk Rural District. Most of them send their milk to the Dundalk Urban area, where they are registered as purveyors.

Regular inspections are made of the premises and the cows. The places are kept in a satisfactory condition, and the cows are healthy. The milk supply is a good one.

Public Health (Veterinary Inspection) Order

There are five slaughterhouses and five butchers' shops in Dundalk Rural District. The slaughterhouses and the animals killed are inspected weekly. In addition to the ordinary supply of meat, a number of animals are killed at Christmas in the various villages, and these are also inspected by me.

The meat supply is a very good one.

J. T. CLINTON, M.R.C.V.S.

APPENDIX 5

*Borough of Drogheda***Dairies, Cowsheds and Milkshops Order**

The milk supply of Drogheda is derived from 35 registered Dairies in the Borough and from dairies in the surrounding rural districts of Meath and Louth.

Milk is supplied from tuberculin tested herds, only one of which is in the Borough.

It is to be regretted that there are not more enterprising dairymen in the Borough area to supply tuberculin tested milk.

The dairy premises were regularly inspected by me, and on the whole were maintained in good sanitary condition. Two cows found to be giving tubercular milk were slaughtered.

The Milk and Dairies Act, 1935, which will be put in operation in the coming year, 1937, will tighten matters up and further help in producing a sound, clean milk supply.

Public Health (Veterinary Inspection) Order

The butchers' shops in Drogheda number 20, and the premises are well kept, but it would be a great addition if all the shops had enclosed glass fronts to protect the meat from dust contamination.

Some of the shops are excellent.

The slaughterhouses are nine in number. Several local butchers slaughter in the premises of the Meath and Louth Farmers' Association in Dyer St., but at times there is much congestion in these premises, and the meat then cannot be dressed in the absolutely clean manner one would wish.

Lighting in winter time is bad, which, with the congestion, makes thorough inspection of carcasses and organs difficult.

A Public Abattoir is essential, as I pointed out in previous reports.

The meat supply during the year was up to a good standard as regards quality and soundness. The carcasses of all cattle, sheep and pigs slaughtered in the Borough, after inspection, and if passed sound, are stamped with the Borough stamp. Over five tons of meat were condemned as unsound during the year, which includes five whole carcasses of beef condemned for tuberculosis.

ANDREW A. DONNELLY, M.R.C.V.S.

APPENDIX 6.**Municipal Progress in Dundalk, 1936-37**

WATERWORKS.

The Town's Water Supply is in a satisfactory condition, but there is an increased demand due to the Council's Housing programme. Several extensions to meet housing needs were carried out during the year.

HOUSING.

The Council completed the erection of 91 houses during the year, and there are at present 161 houses in course of erection. Of the 91 houses erected, 48 of these were of the better type, consisting of five rooms with bathroom. The remaining houses are to supply the needs of persons displaced from unhealthy areas. About 15 houses were built under the Housing Act, 1932.

ROADS.

A high standard was maintained on all roads during the year. Several roads and footpaths were laid down in permanent form in concrete and bitumenous macadam.

SEWERAGE.

The first section of the Sewerage and Sewage Disposal Improvement Scheme was completed and the second section commenced. The Sewerage system has been well maintained. In housing areas a considerable number of extensions was carried out.

FIRE BRIGADE.

The Fire Brigade has now become highly proficient, and has attended several fires inside the Town and in the Co. Health district during the year.

J. F. DORIS, Town Surveyor.

APPENDIX 7.

Municipal Progress in Drogheda, 1936-37

For the year 1936 major municipal activities were principally confined to Housing, but the town services otherwise were maintained with minor improvements.

WATER SUPPLY.

The extensive addition to the water supply of the town constructed in 1935 came into use in 1936, principally as a source of unfiltered water for factory use, but the filtered supply was drawn on as required, and the curtailment of the town's supply which was necessary during the summer months of previous years was dispensed with.

HOUSING.

The following schemes to house those displaced from clearance areas or condemned houses were completed during the year:—

136 4-roomed houses, Hardman's Gardens.

12 4-roomed houses, Patrick St.

18 4-roomed houses, North Road.

Tenders have been invited for a further 136 houses, and plans are being prepared for a further 200.

SEWERAGE.

The existing system of direct discharge into the River Boyne was maintained as usual during the year.

STREETS AND PATHS.

The usual maintenance was carried out on the Streets and Paths with a continuation of the policy adopted in 1935 of replacing the badly worn with properly constructed concrete paths. In addition, a start was made (with funds received from the Government as Unemployment Grant) with the concreting of four narrow, heavy trafficked streets in the town, viz., Dyer St., John St., Bessexwell Lane and Bachelor's Lane.

REFUSE COLLECTION.

The system of domestic refuse collection started in 1935 of collecting refuse in the outskirts of the town with a motor vehicle, and in the centre of the town with horses and carts, was continued during 1936, and worked fairly satisfactorily.

GENERAL.

With a view to the safeguarding of lives and property, the Corporation decided in 1936 to organise a properly equipped Fire Brigade. Sanction was received from the Local Government Department to purchase a municipal motor fire engine, which is now on order. A start has also been made in the enrolling and equipment of a suitable staff.

A. J. DALY, Borough Surveyor.

APPENDIX 3.

Annual Sanitary Report of the Urban District of Dundalk

The number of infectious disease cases notified for the year ending 31st December, 1936, was—71 Scarlatina, 8 Diphtheria, 1 Croup, 2 Puerperal Sepsis, 1 Influenzal Pneumonia, and 1 Facial Erysipelas; the premises and clothing were disinfected in all cases.

Inspection of Factories, Workshops, Bakehouses, etc., was carried out during the year; the sanitary accommodation provided for employees at two of the factories was inadequate, and I reported the matter to the Town Surveyor, who served notice on the parties concerned to provide adequate accommodation. The work is now in hand.

A notice was also served on the G.N.R. respecting the condition of the principal lavatory in the Railway Works, no water being available to flush the closets at time of inspection, and the walls and floors being in a dirty condition. The terms of the notice were complied with.

The number of houses reported as insanitary and unfit for habitation by the Medical Officers of Health was 46. The Council have made Clearance Orders in respect of 42 of these houses and Demolition Orders for 2, and a Closing Order for the remaining one.

Clearance Orders were also made in respect of 88 houses, and Demolition Orders for 5 houses which had been reported on as insanitary previous to 1936.

Notices were also served on an owner of 11 houses, under Section 19 of the Housing (Miscellaneous and Provisions) Act, 1931, to carry out the necessary repairs reported on by the Medical Officer of Health.

The number of new houses constructed, completed or occupied during the year was 133; 69 of these houses are four-roomed, and were erected to re-house people from slum clearance areas; 48 houses erected on St. Alphonsus Road contain 6 rooms; 16 houses built in Quay Street contain 4 rooms.

There are at present 161 houses in course of construction to re-house people from unhealthy areas.

The number of licensed slaughterhouses in the Urban Area is 12, and inspection is carried out regularly. A notice served on the owner of a slaughterhouse to provide a proper galvanised receptacle was complied with within the time specified.

There is only one common lodging house registered in the Urban Area. Inspections have been carried out at regular intervals, and the general standard of cleanliness, etc., is good.

During the year I carried out 2,010 inspections, 37 informal notices, and 61 Statutory notices under the Public Health Acts were served. A prosecution was brought against the owner of a house for not complying with the terms of a notice which had been served in respect of a

water closet which was in a defective condition, but before the case came to court the work was completed and the costs of the case paid to the Town Solicitor.

The cleansing of privies and ashpits in houses up to and including £6 valuation, and the emptying of dust bins from all Council houses, is done by Contract. This entails the emptying of 673 dust bins once per week, and the cleansing of 871 ashpits twice or whenever necessary during the year. The number of houses in the Urban Area for which no provision has been made for the cleansing of ashpits, etc., is roughly 1,500, and the indiscriminate dumping of refuse from some of these houses is a regular occurrence. During the year some refuse which had been deposited in the Demesne was traced to a local shopkeeper. The matter was reported to the Town Solicitor, who received an apology and a guarantee from the trader in question that he would not deposit any more refuse except on the Council's sloblands. Forty-one notices were served during 1936 on residents in Stapleton Place, the Crescent, Dublin Street and Vincent Avenue re the deposit of refuse in the laneway at the rear of the above houses. The adoption of an up-to-date scavenging scheme for Dundalk is strongly recommended, as it is essential in the interests of public health.

The number of privies and ashpits abolished during the year by the demolition of houses is 15; the number of houses converted to the water carriage system of drainage was 35. Dust bins were substituted in 177 houses to replace ashpits.

The number of Dairymen and Purveyors registered in 1936 was 61. During the year I accompanied the Co. M.O.H. on an inspection of all cowsheds in the Urban Area, under the Milk and Dairies Act, 1935, which comes into operation on January 1st, 1937. All dairy owners in Dundalk will have to reconstruct their cowsheds to comply with the terms of the Act.

There were 68 Vaccination Defaulters in the Urban Area on 31st December, 1936. Nine prosecutions were brought during the year against the parents of Vaccination Defaulters; one case was dismissed on the production of a certificate relating to the illness of the child; fines and costs were imposed on the remaining eight.

LEO P. LYNCH, Sanitary Inspector

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APPENDIX 9.

Annual Sanitary Report on the Municipal District of Drogheda

Since my last annual report 166 new four-roomed houses have been erected and let; 136 at Crushrod Lane, 12 at North Road, 12 at Patrick Street, and 6 at Upper North Road.

Families have been moved into these houses, and their houses closed and demolished, from Nunswalk, Scarlet St., North Road, Patrick St., Hardman's Garden, George's St., Wilson's Court and Marsh Road.

Families have also been taken from slum areas at Peter St., Murphy's Court and tenement, Magdalen St. Those last mentioned places have been closed and condemned.

SLAUGHTERHOUSES.

The slaughterhouses have been regularly inspected by the Veterinary Inspector and S.S.O. The organs and carcasses of animals condemned by the Veterinary Inspector were collected by the Corporation staff and destroyed at the Corporation dump. The bye-laws dealing with Meat Inspection and Distribution are now in force in the Borough, and no person is allowed to sell meat until it is examined, passed and stamped with the official Seal of the Corporation by the Veterinary Inspector.

COMMON LODGING HOUSES.

There are only three common lodging houses in the Borough, males only being kept. I had to draw the attention of the local Medical Officer of Health to the bye-laws not being observed in one in Dyer St., owned by a Mrs. A. Callaghan. Notices under the bye-laws were served on the owner, and an improvement took place. If on further inspection there is cause for complaint, I will report to the County Medical Officer of Health, with a view to have prosecutions taken and the place closed.

FACTORIES AND WORKSHOPS.

These were inspected regularly during the year. Owing to the increased number of employees at the Boot Factories, Marsh Road, Westgate and the Iron Works, Groves Lane, sanitary notices were served on the different secretaries, with a view to providing more sanitary conveniences. On the occasion of my last visit the work was in progress.

REGISTERED DAIRY OWNERS AND PURVEYORS OF MILK.

There were 40 Dairy-owners and 36 Purveyors of Milk registered within the Borough during the year. Samples of the milk were regularly taken for analysis.

INFECTIOUS DISEASE.

Seventeen cases of Diphtheria, 1 of Typhoid Fever and 2 cases of Scarletina were notified. The usual disinfection was carried out by instructions received from the different Medical Officers of Health.

DOMESTIC SCAVENGING.

Traders' boxes and dust bins are cleared by 10 o'clock each morning, and also the dust bins, etc., from the principal streets. In the out-lying districts the dust bins are cleared twice weekly.

WATER SUPPLY.

Several times during the year the water supply for domestic use had been sent for bacteriological examination. Samples were also sent for chemical analysis, taken before and after filtration.

Report on Insanitary Areas inspected by the County Medical Officer of Health, Dr. J. A. Musgrave, and the Sanitary Sub-officer.

The principal defects found in the houses were overcrowding; damp clay floors; defective drainage; primitive sanitary accommodation; mud walls; delapidated roofs; dampness in houses for want of eve gutters and down pipes; deficient in light and air; want of a proper water supply, and back doors.

The defects found were submitted to the Corporation, together with the names of the occupiers, and the name of the Medical Officer of each Dispensary District. The object of these reports is to have the insanitary areas scheduled off, and in the future to have Closing Orders obtained.

Attached are the names of the streets, districts and numbers of the houses in the condemned areas.

No. 1 District—Medical Officer of Health, Dr. P. D. McCullen.

Scarlet Street, occupiers detailed 5.

King Street Houses, occupiers detailed 16

Medical Officer, No. 2 District—Dr. P. J. Murray.

Boyne Place, off Dyer Street, occupiers detailed 10

Patrick Street and Rope Walk, occupiers detailed 25.

Hardman's Garden, occupiers detailed 6.

(No. 2) George's Street, occupiers detailed 4 and 1 closed house.

(No. 2) Gravel Walk, off George's St., detailed 7.

(No. 2) George's Street, occupiers detailed 4.

North Road, occupiers detailed 6.

Mill Row (cul de sac off Trinity St), occupiers detailed 13.

Mell, occupiers detailed 18.

No. 3 District—Medical Officer of Health, Dr. J. Hardy.

Scotch Hall, Marsh Road, occupiers detailed 10.

Tenements, Marsh Road.

No. 1, occupier detailed 1, used as a workshop.

No. 2, occupiers detailed 3.

No. 3, occupiers detailed 3.

No. 4, occupiers detailed 3.

No. 5, occupier detailed 1.

These tenements are in a delapidated and dangerous condition.

Dale, off Marsh Road, occupiers detailed 13.

John's Gate, off John Street, occupiers 15.

Wood's Court, off John's Gate, occupiers detailed 9.

Hungry Hall Road (Cherrymount), occupiers detailed 8.

Number of Samples taken under the Food and Drugs Act during the year.

New Milk	...	...	...	...	151
Buttermilk	...	...	...	...	1
Pork Sausages	...	...	...	...	3
Beef Sausages	...	...	...	...	1
Butter	...	...	...	...	15
Margarine	...	...	...	...	4
Ice Cream	...	...	...	...	1

Twenty-two samples of water were sent for analysis and bacteriological examination during the year.

I also had six rats, caught in the vicinity of the docks, sent to the National University for bacteriological examination.

The results of the analysis and bacteriological examinations were submitted to the Sanitary Authority.

Number of Notices served during the year	50
Informal Notices	19
Premises inspected	2027

PATRICK WELDON, S.S.O.

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APPENDIX 10.

Annual Report on Ardee

The sanitary condition of the district has been considerably improved in recent years, and the high standard set up has been maintained. Its immunity from any serious outbreak of infectious disease over an extended period of years has continued, which is a most satisfactory feature of public health to place on record. This in large measure is, no doubt, due to the improved housing conditions, which is a very noticeable and a very important consideration affecting the general welfare of a large section of the community, who were heretofore housed under inferior conditions, and also to the improvements in sanitation that were equally essential.

During the year the new sewerage scheme for Ardee town was completed, and the work of connecting the houses with it is taking place. As the new system of drainage makes provision for the needs of practically the entire town, it is expected that the numerous residents who were deprived of such necessary accommodation will, without undue delay, take advantage of the facilities provided.

As regards Housing, the Town Commissioners have apparently accepted responsibility for satisfying the needs of the township, and as a result of their successful efforts several families have been provided with new houses. Considering the generous manner with which the problem has been dealt with and the rapid progress made, it can be said that the most urgent needs have been attended to, and comparatively little more remains to be done to complete the task.

The same cannot be said of the Rural area, where the number of houses erected is inadequate to meet the needs of those who are obliged to live in dilapidated houses, with earthen floors, etc., while others are still in occupation of houses that have been condemned for several years. The shortage of houses in the Rural area has been emphasised time and again by the number of applicants for vacant cottages whenever such occurs. Owing to want of accommodation in the country, the tendency of the rural labourer to reside in the town is very much on the increase, and for various reasons it is not altogether desirable.

Water supplies were equal to the demand and no complaints were received, with the exception of the residents in the townlands of Stickillen, Hurlstone and Mullenstown, where the supplies obtainable were admitted to be inadequate. The Board of Health have been apprised of the facts and have decided to remedy the complaints.

The provision of a dumping ground and arrangements for the cartage of refuse in the town area would be an advantage to the poorer classes, who, by reason of having no recognised dumping ground for disposal of refuse, dispose of it by throwing it alongside the roadways, which is unsightly and objectionable, and should be discouraged.

V. J. MATHEWS,

San. Sub-officer and Dairy Inspector,

APPENDIX 11.

Nature and Number of Articles Analysed and Result of Analysis

Entire County with exception of Municipal District of Drogheda

(Population 49,799.)

			Samples	Genuine	Adulterated
Milk	...	...	67	66	1
Butter	...	...	26	25	1
Margarine	...	...	13	13	0
Buttermilk	...	...	4	4	0
Whiskey	...	...	21	20	1
Tea	..	...	5	5	0
Sugar	...	...	8	8	0
Cocoa	...	...	2	2	0
Wine	...	...	13	13	0
Stout	...	...	8	8	0
Beer	...	...	2	2	0
Porter	...	...	1	1	0
Lard	...	...	7	7	0
Dripping	...	...	2	2	0
Beef Suet	...	...	1	1	0
Rice	...	...	6	6	0
Flour	...	...	5	5	0
Flake Meal	...	...	2	2	0
Coffee and Chicory	...	...	1	1	0
Custard Powder	...	...	1	1	0
Cheese	...	...	4	4	0
Salt	...	...	1	1	0
Cream of Tartar	...	...	2	2	0
Bread Soda	...	...	2	2	0
Raisins	..	...	1	1	0
Marmalade	...	...	3	3	0
Jam	...	...	10	10	0
Sausages	...	...	1	1	0
Totals			219	216	3

Municipal District of Drogheda

(Population 14,495.)

			Samples	Genuine	Adulterated
New Milk	...	...	151	148	3
Butter	...	...	15	12	3
Margarine	...	...	4	4	0
Beef Sausages	...	...	1	1	0
Pork Sausages	...	...	3	3	0
Ice Cream	...	...	1	1	0
			<hr/> 175 <hr/>	<hr/> 169 <hr/>	<hr/> 6 <hr/>





